New Orleans Medical
and
Surgical Journal

Vol. 78 JANUARY, 1926 No. 7

THE SWIFT-ELLIS TREATMENT*

FURTHER EXPERIENCES.

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In April, ten years ago, I read a paper before the Orleans Parish Medical Society entitled, "Experiences with the Swift-Ellis Treatment." This is to present further experiences with this method, gained during the past ten years. As is well known, the generally accepted procedure is the injection of one of the Arsphenamines into the veins; after the lapse of from one-half to one hour, forty or fifty cubic centimeters of the salvarsanized blood is withdrawn, and is allowed to clot for twenty-four hours, at the end of which time the supernatant serum is decanted off, and after dilution with normal saline and inactivation, or in its natural state, is ready for injection into the spinal meninges. For the past two years Sulpharsphenamine has been my choice, with the use of the serum undiluted and not inactivated: never more than twelve cubic centimeters being injected, always preceded by the withdrawal of twenty-five cubic centimeters, or more, of cerebro-spinal fluid. Spinal puncture is done in the usual manner, the meninges being entered between the third and fourth, or the fourth and fifth lumbar vertebrae, the needle kept in the horizontal position, close to the spines of the vertebrae, though not in the mid-line. An ordinary Quincke needle, 18 bore, of nickeloid is used, following anaesthesia with one per cent novocain. The patient is in a sitting position. The serum is injected with a twenty cubic centimeter all-glass syringe, positive pressure being used. When properly performed this whole procedure is absolutely painless, and when pain is produced, it is a sign of faulty technique. The treatments are given at weekly intervals.

The indications for the use of the Swift-Ellis treatment are narrow. I agree with Stokes, Draper, Fordyce, and others, that it should be reserved for those cases which do not respond, as shown by examination of the spinal fluid, to the routine treatment of syphilis. The presence of a positive fluid does not indicate its use, until it is known that the fluid does not yield to energetic and proper systemic treatment.

It is generally accepted that neuro-syphilis begins in the meninges; therefore, the earlier this condition is recognized, the better the outlook for prompt and permanent cure. If spinal puncture is made on every case of syphilis before the case is discharged as cured detection is certain. When the laboratory examination of the spinal fluid reveals meningeal involvement, six months of intensive treatment should be tried before intra-spinal therapy is resorted to, but if the characteristics of the fluid have not shown marked improvement, the Swift-Ellis treatment is then the method of choice. At this early stage, symptoms and neurological signs are usually absent, and it is only too often difficult to hold these patients to a long and punishing

*Read before the Louisiana State Medical Society, New Orleans, April 21-23, 1925.

treatment. The intra-spinal treatments should be given in courses of eight, a week intervening between each treatment. At the end of such a course six weeks' or two months' rest is advisable. Two courses are the minimum, subsequent treatments depending on the examination of the spinal fluid. Neurosyphilis may remain in the meningeal stage for many years, but the lapse of time does not alter the rules of treatment, though the prognosis is more problematic.

Meningeal neurosyphilis is curable in ninety per cent of cases.

Cerebro-spinal syphilis should receive intra-spinal treatment promptly, and it should be continued until the laboratory and clinical signs have completely and permanently cleared. This type can be offered an excellent prognosis.

Vascular neurosyphilis is not very amenable to the Swift-Ellis treatment; by this, it is not meant that this type is not amenable to treatment, but that it will yield in a fair number of cases to intensive systematic treatment, without resort to intra-spinal treatment, and that the latter does not materially add to our therapeutic armament. Its use is not indicated unless the spinal fluid shows the changes indicative of an accompanying meningeal involvement. Tabetic neurosyphilis may be arrested and certain of the symptoms be relieved, but cure is not to be expected by this or any other known form of treatment. In clinical paresis it is my belief that the Swift-Ellis treatment should never be used, because it is certainly of no benefit, and is often actually harmful. I came to this conclusion many years ago, but have been persuaded by patients' family or physician to administer the treatment against my better judgment, and on each occasion my poor opinion of its value in this disease has been strengthened. The laboratory diagnosis of paresis should not be accepted without clinical evidence, and those cases of paresis which rest on a laboratory diagnosis alone should have the advantage of this treatment, and are often cured.

If cases of neurosyphilis are to be cured with certainty, the diagnosis must be established early and treatment instituted at once. It follows that to accomplish this, spinal-puncture and examination of the fluid must be done before any case of known syphilis is discharged as cured; and that a negative diagnosis is not justifiable in any suspected case of syphilis without a laboratory examination of the spinal fluid. Such cases are in the hands of the specialist in syphilis and the general medical men, and it is to them we must look The neurologist and psychiatrist are not likely to get good results by any form of treatment because these cases come to them only after the lapse of years, and after permanent damage has been done.

It must be borne in mind that mere spinal puncture with drainage will bring about a temporary clearing-up of the changes in the spinal fluid, but the relapse is prompt. It seems that the Swift-Ellis treatment following the drainage, will clear the fluid of its pathological changes and hold it clear. I am well aware that very disastrous results have been observed following intra-spinal therapy, but I am compelled to believe that this is due to some fault in technique, as in the course of over ten years, during which several hundreds of such treatments have been given, I have observed no alarming reaction and no bad results, with the possible exception of a few cases of paresis already mentioned.

To sum up, it is in the meningeal types that intra-spinal therapy has its greatest value and its least in the parenchymatous. It is useless to use it in established paresis: it may arrest tabes in its progress, but cannot cure it: vascular neurosyphilis gives rather poor results, and unless the spinal fluid shows the changes of an accompanying meningeal involvement the rationale of this particular form of therapy

is not evident. Cerebro-spinal syphilis, using the term in its restricted sense, usually offers a good outlook.

In conclusion, I feel that two facts can be stated as fairly certain: the Swift-Ellis treatment is indicated in narrow limitations in the treatment of neuro-syphilis; with the proper technique, it is not dangerous.

DISCUSSION.

Dr. Joseph Hume (New Orleans): Some one has said that in the acquisition of knowledge we go through three stages—first, the acquisition of the fact; second, the latent possession, and third, the conscious possession. Only recently our profession has had conscious possession of the clinical facts which underlie the understanding of nervous syphilis. These facts should be here woven into our consciousness, a part of our daily working capital, so that we may give these unfortunate patients correct treatment and save many off them from a state of invalidism. These facts therefore are about as follows: First, that any one who has syphilis may have nervous syphilis; second, that a blood Wassermann, whether positive or negative, is absolutely no indication of the conditions that obtain in the spinal fluid; third, that many people go around with nervous syphilis who present no external phenomena which we can recognize except by spinal puncture, and that the early diagosis of nervous syphilis is essential in clearing up many of these case which is unrecognized and untreated will later on become impossible to cure. Therefore, it is absolutely essential that to handle syphilis every patient should have spinal puncture done. What is the best time to do this in a case which you conduct from the beginning? It certainly should be done at the end of the year, better perhaps at the end of the first six months, but it should always be done before the patient is discharged as absolutely cured. Therefore we find a group of cases in which we have positive signs without any other findings whatsoever, and it is in these cases that the most active treatment should be instituted.

The next question in syphilis is what is the best kind of treatment for the individual case. These are essentially individual cases, each patient responds in his own personal manner to the disease and to the treatment, and therefore I believe these cases should first receive an active and intensive form of treatment. No one can afford to be dogmatic as to what constitutes intensive treatment, but it should consist at least of intravenous neosalvarsan, or mercury by needle or inunction, and iodides. If these cases after four to eight or ten months show no improvement in spinal findings, it is time then to give them an intensive course, to consider the Swift-Ellis treatment. For over ten years Doctor Jamison and myself have co-operated in this treatment, and we have met with no bad effects, no accidents, and we have absolutely cleared up many of these cases and kept them cleared up for years. In other words, it is the best plan of treatment when all other methods are inadequate—by it we can reach every case of the types he mentions, and where intensive treatment does not show improvement in the spinal findings, I think the Swift-Ellis should be tried before the case is abandoned or hopeless.

Dr. I. L. Gordon (New Orleans): I do not want to say anything about Doctor Jamison's technique of the Swift-Ellis treatment, as he is an artist in giving that treatment, but I do want to say one or two words that will apply to the general practitioner, the men who are not as well fitted to accomplish the technique of the Swift-Ellis treatment as Doctor Jamison. Most of us who are trying to treat syphilis in clinics run upon people who have either neurosyphilis or meningeal syphilis. Most of us are not accomplished laboratory technicians. There is a very simple thing you can do if you are afraid to withdraw the blood and keep it for 24 hours and then introduce it into the spinal canal. Most of us can d a spinal puncture. After you have given your meningeal or neurosyphilitic his dose of salvarsan, wait one hour, and then do a cerebrospinal puncture under aseptic conditions. I want to agree with Doctor Jamison in the use of anesthesia in making a spinal puncture because a lot of people do it without any anesthesia, with the result that if the patient jumps they get spinal cord injury. We do it by withdrawing from 10 to 15 cc. of fluid and then wait one hour, and in that way you can increase the arsenical content of the spinal canal. If you are well trained, do the Swift-Ellis method, but if you are not, and you do not want to run the risk of keeping the fluid for 24 hours and then injecting it again, it is much better to do the simple method of puncture and drainage of the canal.

Dr. P. B. Salatich (New Orleans): I had a young woman that I delivered of a very much deformed fetus. I had a Wassermann taken in the father and also in the mother and they were both negative. I gave this patient some salvarsan and she seemed to get along all right, but after a while she came and said she had divorced this first husband and she was going to get married again. I said, "I think in all fairness to the man

you are going to marry you should have a spinal puncture made." Her blood Wassermann had been taken several times and was always negative. We made a spinal Wassermann and it came back positive. I then followed the idea of Doctor Gordon, and gave her salvarsan, withdrew from 15 to 30 cc. of the spinal fluid. I did that on two occasions and then six months after and one year afterwards the spinal Wassermann was negative. I arise for some information on this point I would like to know whether Doctor Jamison and Doctor Hume have had any experience along this line This woman did not show any symptoms, she simply had a positive Wassermann.

Dr. J. H. Musser, Jr., (New Orleans): Two or three points I think need to be accentuated. In the first place the point Doctor Hume brought out—the necessity of making a routine spinal puncture in these patients with syphilis before you discharge them as cured. I think that is of primary importance.

The second point is that this method of treatment is certainly not only valueless, it is probably harmful in the treatment of parenchymatous and vascular neuro-syphilis. Its use is limited, but undoubtedly, as Doctor Jamison has said, it has value in some cases.

Doctor Gordon has brought out a point that is rather interesting in regard to the value of the Swift-Ellis treatment as contrasted with simple lumbar puncture. It is a question that is an open one. It happens that the cases we have had the opportunity of observing have been cases in which an attempt was made not to introduce salvarsanized serum into the canal, but simply to drain the canal. After all, when you put your serum into the canal, you are putting a very minute quantity of arsenic in and it is a question just how much effect that very minute quantity can have. On the other hand, by drainage of the canal, you permit the introduction through the systemic circulation of a relatively large amount of salvarsanized blood serum. It has always been a question whether it is necessary to withdraw the serum and then subsequently reintroduce it, or whether you would not get just as good effects simply from lumbar puncture and then administer the arsenic. At the University of Pennsylvania, the Swift-Ellis treatment was employed for a year. Then for the next three years the simple lumbar puncture and the associated injection of an arsenic preparation was the treatment employed. About a year ago the results were correlated and they showed that really there was not very much difference between the two methods of treatment.

Dr. J. B. Guthrie (New Orleans): The discussion has taken up a very interesting phase as regards the mechanism of the therapy in the Swift-Ellis as compare with other methods of simple evacuation of cerebro-spinal fluid. In 1917, Herrick advocated strongly the abandonment of the salvarsanous route for the administration of serum and the administration through large doses of the serum intravenously. He did not recommend the abandonment—he was perfectly indifferent as to whether or not the injection was wiven intravenously. It was a matter of considerable importance then and at the meeting of the American Medical Association we discussed it. I had the good fortune to be associated for a period with Amos if the Rockefeller Institute and it brought to my mind the fact of the coffer dam action of the meningeal choroid plexus which prevents the diffusion of choroids into the cerebral spinal fluid. Any substance,—it matters not what,—any substance injected into the canal, cerebro-spinal fluid or drugs, sets up a meningitis which results in the destruction of this dam. I believe on further study of these cases that we are going to find that what has happened is that the injection given this week, the systolic treatment or even blood serum which is a foreign body—the treatment given today of the blood serum salvarsanized will result in meningitis which breaks down the meningeal choroid plexus and allows arsenic of the next treatment to diffuse itself more rapidly into the cerebro-spinal canal and its adnexa. I think we will find that is the explanation of what has happened in these various manipulations of the cerebro-spinal fluid and the effect of the intravenous injection of salvarsan.

Dr. H. P. Jones (New Orleans): I want to emphasize particularly the importance of what Doctor Jamison suggests in regard to the use of an anesthetic, not only for the comfort of the patient at the time, but very often these patients who have spinal puncture have nervous disturbances that may be a symptom of insanity and they remember that puncture as long as they live, and if they subsequently develop any violent attacks they blame you for it.

I have treated a great many cases of meningitis and one of the things that upsets me a great deal is to have the report come in that the pressure seems to be increased, or seems to be nil, or very low, without any actual measurement of the spinal pressure. This is an ordinary pressure manometer which contains mercury and this is connected with a needle. (Showing instrument.) The trouble is that it has a good deal of rubber that is apt to be vulcanized at the time, and as a matter of fact these machines are scarcely available unless you spend some hours to get them in order. So we are using at the Hospital this method; the patient lies on his side, the needle

is put in and next to that a small rubber tube about one tenth of an inch in diameter. That tube is raised or lowered until the spinal fluid rises or lowers. Then you take a rule and measure the distance from the point of the insertion of the needle perpendicularly to the height of the column of fluid. The height of the fluid in this tube will balance the pressure of the spinal canal. As the specific gravity of the cerebro-spinal fluid is normally from .006 to.1010, and the specific gravity of mercury is 1359, for every 13.59 cs. of fluid pressure you have in your tube, you have a 10 mm. pressure reading on the mercury manometer. This instrument can be sterilized and used at any time. It is exceedingly important to know your spinal pressure in any condition in which you make a spinal puncture. You should not try spinal puncture without knowing what the pressure is. The normal pressure is from 6 to 8 millimeters of mercury. If you have to give a meningococcic serum and do not know how much fluid to withdraw, all you have to do is to have a piece of rubber tubing say 8 to 10 cm. in length, attach it to your needle, let the fluid run out until it ceases to flow. Then you are in a safe position probably to make a spinal injection.

Dr. Chaille Jamison (closing): It was not the purpose of this paper to attempt to decide what was the proper method of treatment of cerebro-spinal syphilis. It was simply to lay before you the experience gained in ten years of work. Doctor Hume and I have been aware for years,— for many years, that drainage of the spinal canal once or twice without anything given in the veins at all, returned laboratory signs negative. It makes no difference whether you put anything in the veins before you do the drainage. I do not say it changes the Wassermann reaction, but it will change the cell count without any trouble. We had two cases that I remember in which before resort was made to the Swift-Ellis treatment, the patients were given salvarsan 25 times, and 25 times following that salvarsan the fulid was drained—the needle was put in and the fluid ran until it quit. It often runs to 50 to 60 cm. without any harm to the patient. The tube will not empty; even with suction it could not empty. One patient we gave the course of salvarsan in the veins and drainage afterwards, and then examined the spinal fluid after eight drainages and the fluid would be negative. This patient would come back in two months and his fluid would be positive again. That went on, and we began to think that we must do something. We found out for ourselves, (because the literature will tell you anything you want to find out on the subject)—we worked out for ourselves definitely that the only way we could get that fluid negative and keep it negative was by using serum into the cord afterwards. We might have done as well with some other foreign protein. I am not at all convinced that it is necessary to have salvarsan in the serum. I am absolutely at a loss on the action of serum in such a condition. I am entirely at a loss on the administration of foreign protein. I cannot explain it —I have never been able to find an explanation.

Answering Doctor Salatich, as to our experience with the positive Wassermann. A positive Wassermann in the face of clinical signs we never accept. The Wassermann must be checked by at least two other workmen. The man who goes on one positive or negative Wasserman, that flies in the fact of clinical signs will certainly get into trouble. As a general rule, a single positive Wassermann is very fallacious, no matter who does it.

I cannot agree with Doctor Jones as to the value of the manometer reading in this line of work. There again we have used every kind of mercury manometer that has ever been put out, and we have never found one on which you could not get any pressure you wanted. As we treat our patients in a sitting position, the method is not at all practical because in this position, the reading of the figures are not known. It is a well taken point that you must not increase the pressure of the spinal fluid, but we get around that by always withdrawing 25 cm. of cerebro spinal fluid, and we prefer to withdraw 40 to 50 cm.

FEAR.*

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The word fear has been variously defined as apprehension of approaching evil, danger or harm, solicitude, dread, terror. It is sometimes used in the sense of respect for and obedience to authority, especially as these take the form of awe and reverence toward the Deity with due regard to His law and word.

From the psychological and psychiatric standpoint fear is considered as one of the principal emotions. J. B. Watson defines an emotion as being "an hereditary pat-

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*Read before the Louisiana State Medical Society, New Orleans, April 21-23, 1925.

tern reaction involving profound changes in the bodily mechanism as a whole, but particularly of the visceral and glandular system."

According to Watson, fear is an emotional reaction belonging to the original and fundamental nature of man.

Experimental psychology shows the following situations to excite fear responses:

(1) "To remove suddenly from an infant, all means of support, as when one drops it from the hands to be caught by an assistant. (In the experiment the child is held over a bed upon which has been placed a soft feather pillow.) (2) Loud sounds. (3) Occasionally when an infant is just falling asleep or is just ready to waken a sudden push or slight shake is an adequate stimulus. (4) When an infant is just falling asleep, occasionally the sudden pulling of the blanket upon which it is lying will produce the fear reactions.

"The responses are a suddent catching of the breath, clutching at random with the hands (the grasping reflex invariably appearing when the child is dropped) sudden closing of the eyelids, puckering of the lips, then crying; in older children possibly flight and hiding.

"In regard to the age at which fear responses first appear, Watson states he can say with sureness that the above mentioned group of reactions appear at birth."

There is a popular opinion that children are instinctively afraid in the dark. This is, however, erroneous. "When such reactions do appear it is due to other causes; darkness comes to be associated with absence of customary stimulation noises, light, etc., they should be looked upon as "Conditioned" fear reactions.

"We all know that it has been customary from time immemorial for children to have been "scared" in the dark—either unintentionally or as a means of controlling them.

"The fear reactions we see in the dark, in grave yards, at night, at lightning, thunderstorms, and in many other definite situations, probably belong in the conditioned emotional reaction class. All of the definite phobias seen in the psychoneuroses where the phobia is due to a definite situation or object belong in this class." Such reactions are more numerous in individuals of the unstable emotional type, and especially among frontier and primitive peoples when every crackling of a twig or cry of an animal or shaking of a bough may be fraught with danger."

The effect of fear on the mind, is often, if unchecked, very disastrous especially where a disease is threatened or sickness present.

On emotionally unstable, psychopathic individuals the influence of fear is far more serious in its effect than the worst form of any dreaded malady. The terror inspired by certain epidemic diseases is often as fatal as the infection—paralyzing the system and robbing the body of the natural stability of its nervous system and the soul of the buoyancy of hope, making victims of those who from strength, age, and personality had the best probability of escaping!

Fear is one of the most potent mental poisons, antagonizing health and medicine, acting fatally in the morbid development of various forms of psychoses; and as *faith* has cured more diseases than we have ever prescribed for, so fear is more destructive than the worst somatic illness.

In the complex adjustments of our modern business world, the struggle for existence, especially in large congested monetary centres, contagion now and then breaks out in fright, which imperils the fortune and lives of individuals or a peoples' financial stability; just as a country's cause is sometimes lost through panic striking its armies in battle. It should be the duty of the physician, teacher, moralist, and sociologist to study thoroughly fear in all its manifestations in order that it may be controlled

and eradicated in the individual and in society at large.

According to Wm. McDougall the instinct to flee from danger is stimulated by the emotion fear. Upon the excitement of the instinct of flight the locomotor apparatus of an individual is impelled to its utmost exertion and sometimes the intensity and long duraton of these exertions is more than visceral organs can stand so that they are terminated by either exhaustion or death. It is a well known fact that when any of us are confronted with danger or are in a precarious position we have achieved some extraordinary feat of either leaping or running to escape the danger I can recall when I was a child of being in danger and when threatened to be bitten by a horse I leaped over the front steps of my uncle's home to safety on the porch. Numerous subsequent attempts to "clear" the distance in the leap proved futile.

Terror is the term given to the most intense degree of fear and it may involve so great a nervous disturbance as to defeat the ends of the instinct of flight by inducing general convulsions or even death. In certain psychoses the patients' disorder seems to consist essentially in an abnormal excitability of this instinct and a consequent undue frequency and intensity of its operation; the patient lives perpetually in fear, shrinking in terror from the most harmless animal or at the least unusual sound and surrounds himself with safeguards against impossible or imaginary dangers.

Flight is followed by concealment as soon as cover is reached. In primitive man this double tendency no doubt existed. We know that as soon as a little child can run his fear expresses itself in concealment following on flight; and the many adults who seek refuge from the strange noises of a dark night or from a thunderstorm, by covering their heads with the bed clothes, and who find quite irrational comfort in so doing, illustrates the persistence of this tendency.

McDougall states that it is perhaps in the opposed characters of these two tendencies, both of which are bound up with the emotion fear, that we may find an explanation of the great variety of, and variability of the symptoms of fear.

The sudden stopping of the heart beat and respiration, and the paralysis of movement in which it sometimes finds expression are due to the impulse of *concealment;* the hurried respiration and pulse, frantic bodily efforts by which it is more commonly expressed, are due to the impulse of flight.

We are all, no doubt, familiar with the fact that it is not necessary for an intelligent appreciation or anticipation of danger to exist to excite fear. This can be readily demonstrated by a friend or parent inducing symptoms of fear in a child 4-5 years of age by making facial contortions or playful roarings. A child may exhibit every symptom of fear even while he sit upon his tormentor's lap and with an arm about his neck begs him to cease or to promise not to do it again. We all have seen many a child thrown into a paroxysm of terror by the approach of some hideous or grotesque figure that he knew to be but one of his playmates in disguise.

"Of all the excitants of this instinct, the most interesting and the most difficult to understand as regards its mode of operation is the unfamiliar or strange as such. Whatever is totally strange, or violently opposed to the accustomed and familar is apt to excite fear in men and animals, if only it is capable of attracting their attention.

"This avenue to the instinct, the unfamiliar, becomes in man highly diversified and intellectualized and it is owing to this that he feels fear before the mysterious, the uncanny, the occult and the su-

pernatural, and that fear entering as an element into the complex emotions of awe and reverence, plays its part in all religions."

Fear, whether its impulse be to flight or concealment is characterized by the fact that its excitement, more than any other instinct, tends to bring to an end at once all other mental activity, riveting the attention upon its object to the exclusion of all others; owing, probably to this extreme concentration of attention, as well as the violence of the emotion, the excitement of this instinct makes a deep and lasting impression on the mind. A gust of anger, a move of pity or of tender emotion, an impulse of curiosity, may co-operate in supporting and re-enforcing mental activities of the most varied kinds, or may dominate the mind for a time and then pass away, leaving but little trace. But fear, once roused, haunts the mind; it comes back alike in dreams and in waking life bringing with it vivid memories of the terrifying impression. It is thus the great inhibitor of action both present and future, and becomes in primitive human societies the great agent of social discipline through which men are led to the habit of control of the egoistic impulses.

From a therapeutic standpoint we as physicians should carefully seek the cause of any symptoms of fear, anguish, phobia, dread, terror, anxious expectation, "Folie du doute," etc., in our patients and endeavor to eradicate this fear whenever it exists by proper analysis, rationalization, persuasion and re-education. The usual manifestations of fear, the psychiatrist has to contend with, are those seen in anxiety neurosis.

Anxiety is the correlative of fear. While fear, is the emotion which corresponds to a danger threatening the organism from outside, anxiety corresponds to a danger which threatens the organism from within.

According to Freud there develops two groups of typical phobias in anxiety neurosis, the first refers to the general physiological neuroses, while the second refers to locomotion. To the first group belong the fear for snakes, thunderstorms, vermin, darkness, etc., as well as the typical moral over-scrupulousness, and the forms of doubting mania.

"The other group contains agarophobia with all its accessory forms, all of which are characterized by their relation to locomotion. As a determination of the phobia we frequently find a precedent attack of vertigo. Occasionally, after a first attack of vertigo without fear, we see that the locomotion is always accompanied by the sensation of vertigo, it remains possible without any restrictions, but as soon as fear attached itself to the attack of vertigo, locomotion fails, under the conditions of being alone, narrow streets, etc."

The physician or surgeon who comes in contact with any patient exhibiting symptoms of fear, no matter how slight, would do well carefully to analyze these symptoms as he would any somatic symptoms or physical sign of disease.

Of course, in mental medicine as well as in general medicine, it is pragmatic to say prevention is greater than cure. Let us then study our patients more carefully, taking the individual as a whole unit better fitting him to adjust himself in an environment best suited for his welfare, happiness and health.

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DISCUSSION

Dr. W. J. Otis (New Orleans): In discussing the mechanism of fear, the endocrines play an active part. While there is a correlation of all glands, the adrenals are the ones most actively engaged in this mechanism. I speak now from a biochemical standpoint. Certain types, like the

pugnacious and fearless, have a larger cortex in relation to medulla of the adrenal. The timid and meek have less cortex and more medulla. On this ratio, much depends as to reactions to fear. These types may be called the fearless and charging, fleeting and fearful. The adrenals are well termed the glands of emergencies.

Another type of fear is the prevalent one of dying. The fear of death weighed against the weariness or pain of life. As regards this, much depends on one's philosophical and religious ideas on life and death, but much depends also on age, aims in life, aspirations, surroundings, means, opportunities and (power of) enjoyment and last, but not least, his present bodily and mental state of health.

The fear that the neuro-psychiatrist has to deal with is that fear which together with the twin sister, ignorance, leaves its impression, for wherever a lack of understanding exists, wherever phenomena are enveloped in mystery, wherever the source of events is unknown,—there we find fear. Badly handled compulsions, obsessions and ideas with fear as the main factor, always results in a neurosis, phychosis or psychoneurosis. It should be the purpose of not only the neuro-psychiatrist, but also of the teacher, general practitioner, social worker and those most interested in puericulture to aid to a better intellectual foundation in early childhood. Whenever compulsory education is really compulsory, and not a travesty as in many states, where the proper and healthier methods of understanding could be inculcated thereby preventing many adolescent and pre-adolescent nervous diseases which eventually, in many cases, grow up only to become mental hospital subjects or patients in homes for mental defectives and reform schools,—this will tend to improve conditions.

Dr. Edmund McConnelly (New Orleans): Doctor Lopez has said that fear is one of the most potent poisons we have to deal with. We are all familiar with the example he cites, but I think I will go farther and say that fear is probably one of the greatest causes of disease that we have. It springs primarily from our instinct of self preservation, which is of course a primary instinct. It frequently comes in conflict with our herd instinct, which is one of the strongest of the developed instincts, and therefore it is apt to be a great psychic trauma, which forms the basis for a great mass of phobias, all of which go into the formation of a psychoneurosis. The trauma may be deeply buried, it may have occurred in early childhood and be most difficult to bring out.

We are all familiar with the mass hysteria that is caused by fear, great financial panics, during epidemics of disease in which the fears of the people become exaggerated to an unreasonable degree. All of these cases, as Doctor Otis says, are the twin sisters of ignorance. Our method of handling them is to explain them away, but the difficult thing is to find out what to explain.

.Dr. J. B. Guthrie (New Orleans): The neuro-psychiatrist seems to stand apart from us in life, and we send him cases for special care, but because we temporize with them and give drugs and bromides and all that sort of thing, we do not realize that there is a very positive work that may be done along the line he suggests. If we translate the word "fear" into a sensation or an emotion, we find it is one of the normal reactions—an endocrine cycle is started, the production of substances which normally are used up, but which under abnormal conditions are there in quantity and are positively toxic to the individual. These are the things we see every day in patients who are suffering from excess of emotions of one sort or another. If we will quietly sit down with these people and let them tell their story, very often we do not need to be expert psychoanalysts to find out what is the trouble, and once we find out, we can usually very easily save them from their slavery, and slavery it is. I recall very well a woman who had two splendid sons, one in business and one in the Navy, naturally both were away from home,. and she spent her time weeping and bemoaning the fact that her boys were separated from her and from each other. They gave her no cause for anxiety, except that they were not within her reach. This woman's digestion was impaired, she could not sleep or eat normally, and her life was miserable. I called attention to the fact that her worrying was out of proportion to the facts, that if the boys were dead she could not have wept more. I simply showed her the futility of all of this and what damage results from futile emotions. She grasped it herself, she made up her mind to refrain from this useless emotion, and without any medicine whatever she was straightened out, she went ahead and carried on and from that moment was well.

These patients are within our reach and we must teach them to bring about a normal reaction to the emotion, or to restrain the emotion,—to switch it into some other channel, that may be productive of a proper reaction.

Dr. L. L. Cazenavette (New Orleans): The subject, fear, has been well brought out by Doctor Lopez and by those who have preceded me

in this discussion. I rise to bring out a point I think of importance in the handling of patients with such symptoms. It is somewhat in the order of what the last speaker has said. The majority of these patients may be classified in the group of psychoneuroses. They have a lowered capacity to adapt themselves to their surroundings. They face realities with difficulty and worry over trivialities which to them appear very serious. From these frequent worries and anxieties they finally enter the state of fear, from which they seek relief. I believe that we should give these patients the time they demand while relating their symptoms and troubles. We should guide them as they go along and have them, if possible, to disclose the hidden cause or causes of their fears. Listen attentively to them as they look upon you as a doctor and advisor. You will thereby gain their confidence which is your greatest asset towards their relief or cure. A word of advice from you now will be worth a great deal to the patient.

Dr. T. B. Sellers, (New Orleans): Fear is of interest to the surgeon. Crile has proven that psychic shock plays a great part in producing the so-called surgical shock, following operative work. He advised strongly against operating upon any patient that is frightened, unless it is an emergency. Much can be accomplished by patience, on the part of the surgeon. A few minutes spent by him explaining certain things to the patient, and at the same time letting the patient feel that the surgeon has a heart, will do a great deal to overcome this horrible fear.

I want to congratulate Dr. Lopez on presenting this most instructive paper.

SARCOMA OF NASO-PHARYNX*

D. C. MONTGOMERY, M. D.,

GREENVILLE, MISS.

In presenting this paper before the general assembly today my subject would have perhaps been more interesting to the specialist than to you, but because the general practitioner will probably see the majority of these cases first, and as the result of treatment, may depend upon an early diagnosis, I wish to impress upon you the necessity of a careful personal history and an early consultation.

To me the chapter on sarcoma of the naso-pharynx is one of the darkest and gloomiest in otolaryngologic literature. I have chosen as my subject Sarcoma of the Naso-pharynx as my remarks and report of cases will be confined entirely to that condition.

The literature on this subject is extensive but very little of curative measures has been added to our present knowledge. Few cases have been reported as cured and I believe that the majority of these if followed to their final result would show a hasty conclusion drawn by the author, and a final analysis would show that death was the ultimate outcome. Misleading reports of cures, intentional or otherwise, do not benefit these patients nor the surgeons; rather let us report our failures so that others may carry on the fight and thus by learning how we fail, perchance may evolve eventually a method of procedure more applicable and more suitable which will give better results.

Pessimism does not stimulate us to harder work, and does not add one bit to our armamentarium in the treatment of this condition, but my results have been so unfortunate as to destroy every bit of optimism.

I am convinced that if reporters of malignant diseases will report only the end results of their treatment, or if erroneously reported will correct with an amended report, they will go a long way in the progress and assistance of those societies organized for the control of malignant diseases.

I do not intend to go into the pathology of sarcoma except in so far as it has some bearing upon the symptoms and course of the following cases to be reported.

Sarcoma has its origin in the deep connective tissue, periosteum and bone, and spreads toward mucous surface first, later infiltrating bone. The majority of sarcomas are soft and very vascular because

*Read before the Mississippi State Medical Association, Biloxi, May 12-14, 1925.

they tend to grow extensively upon a scaffolding of new blood vessels rather than to infiltrate pre-existing tissues as do carcinoma. The vascularity reveals to the eye the prominence of blood vessels as an essential part of the growth and accounts for the most prominent symptom; spontaneous hemorrhage. The growth is usually rapid and locally destructive. Sarcomatous tissue is very susceptible to infection, accordingly fever is often observed throughout the course of malignant sarcomas, though in some instances it appears to arise from the toxemia and not from infection.

Case 1. History. Patient, woman of 30, complains of inability to breathe through the nose and severe spotaneous hemorrhage. P. I. began two years ago. Patient states she was struck on the nose with a piece of wood with severe hemorrhage following, lasting for three days off and on. This soon got well but she continued to bleed every month for several months. She next noticed some stuffiness of the nose about six months after the injury but attributed this to a bad cold so did not investigate it. This continued to grow worse, however, until she was unable to breathe through her nose at all. There was also present a muco-purulent discharge. Without any warning whatever her nose would start to bleed profusely and would continue to do so for sometime. Often while asleep she would be awakened with blood running into her mouth. There was no pain whatever but a feeling of fullness in the head and stuffiness in the ears due to nasal obstruction. She went to another city and the growth was removed with a great deal of difficulty, and severe hemorrhage, from which she nearly died. She states that this was diagnosed as a bleeding polyp, and that the operation allowed her to breathe freely, but in less than three months the same nasal obstruction was present again. She was operated the second time but with very little relief, the operation not being completed because of the severe hemorrhage. She was seen again by a surgeon who refused to operate. Three years after the beginning of the trouble she came to my office.

P. H. Shows nothing of importance. Had the usual diseases of childhood. No other diseases. Denies venereal history. Has never been pregnant.

F. H. Mother and father living and well. No brother or sister. No history of malignancy in family.

Examination: External—Nose flat across the bridge and somewhat sunken in. At entrance of nares can be seen a dark bluish growth. Palpation elicited some pain at junction of right nasal bone with nasal spine. Also there is separation of the two bones about 1-8". On pressure this bone gives showing of lack of support with its former attachment, the naso spine. On the left side there is some slight separation of the same bones. Inspection of nasal fossae. The right side shows a dark bluish growth divided into three lobes covered with apparently normal epithelium. The nasal fossa is entirely filled up. There is also present a muco-purulent discharge pulsating in character though the growth itself does not seem to pulsate. The left side shows the same character of growth divided into two libes. The growth is very mascular, the slightest pressure causing severe hemorrhage. The stretching of olae of the nose caused severe hemorrhage from the right side so that the complete examination was very difficult. I was able to pass a probe around the growth except at its posterior attachment and along the floor of the nasal fossae.

Trans-illumination showed both antri clear and frontals clear. Post. rhinoscopic examination showed both posterior channels closed with a large growth. There was apparently no ulceration of this growth any where.

X-ray examination confirmed previous examinations and seemed to indicate that the growth had its origin from the posterior end of the middle turbinate on each side, though it was impossible to determine this fact positively.

General examination was made and showed pulse of 120. Temp. 99½. Patient complained of pain around the heart which showed weakness of heart sounds with slight dilatation. No evidence of metastases anywhere. Lungs negative. Kidneys negative. Symptoms,—inability to breathe through nose, stuffy feeling in both ears and fullness over the eyes. Spontaneous and severe hemorrhage almost uncontrollable. No pain at all except on very deep pressure over bridge of nose.

General symptoms: Temp. 99 to 100. Pulse 120-130. Feeling of general weakness. Pain around heart and some shortness of breath. Blood examination 3,500,000 reds. Leukocyte 17,000. Differential Polys 79%. Large Mononuclears 3%. Lymphocytes 18%. Hemoglobin 65%.

Considering the character of the growth, the general condition of the patient, the tendency to hemorrhage, the already rather low hemoglobin per cent, she did not appeal to me as a good operative risk, but I decided to attempt to give her relief, knowing full well the risk I ran of uncontrollable hemorrhage.

Treatment: I decided to use Fulguration on the growth, and wait twelve hours before doing anything further. This was accordingly carried out and much to my surprise and pleasure I found that I was able to manipulate around the growth shortly after this was done without causing bleeding at all.

The next morning from the left side I removed the middle turbinate with about two-thirds of the entire growth, with very moderate hemorrhage. The following day I removed the remainder leaving a clear open passage. The other side was done in the same manner. I was very much pleased that this method of procedure caused so little hemorrhage for I had expected to have a difficult time of it.

I had intended using both radium and Coley's serum on this patient but she has not returned to me yet, though I am expecting her to turn up most any day. Therefore I cannot tell you the end result of this case, but of course unless the condition is controlled with the X-ray and Coley's serum it is sure to return and cause her death.

There are some other unusual features of this case to which I would like to call your attention. First, the slow growth of the sarcoma, extending over a period of three years; the apparent absence of any metastases during that period; the slow infiltration into the surrounding tissues even though operated twice before, which is known to act as a stimulus to many cases of malignancy.

Pathological report: Section shows supplanting and crowding back all normal elements, by active small spindle celled growth invading the bone. Superficially there is tissue resembling nasal mucosa. The structure of the growth is that of periosteal sarcoma. Diagnosis: Small spindle celled sarcoma of the periosteum. Second, the absence of pain, notwithstanding the marked infiltration of the bone and tissues; the severe spontaneous hemorrhage; the symmetrical character of the growth, bilateral and originating from the periosteum of the post ends of the middle turbinate.

This patient received one application of radium and never returned for further treatment. End result unknown.

Case 2. Mr. Barrett. Age 62. Occupation, farmer. Personal history. Was sent to me by family physician because of deafness in left ear, headache over parietal region of head. He first noticed this about one month ago when he became aware of the fact that he could not hear very well in the left ear. Did not pay much attention to this until he began to have headache over the left side of his head, when he then sought treatment. At times there had been slight bleeding on blowing his nose, particularly in the morning. Otherwise no inconvenience. Having been deaf in the right ear for several years he was very anxious about the impaired hearing in the left ear which was progressing slowly.

Usual diseases of childhood. Nothing bearing on present trouble. Denies venereal infection. Does not use tobacco in any form. Has always been well and strong.

No history of cancer, tuberculosis or kidney trouble in his family that he is aware of.

Examination: Well preserved man of about 62 years, active in his work of farming and always well. Necessary to speak close to his ears and in a loud voice to be heard distinctly. Head no evidence of trouble. Left ear canal normal, drum apparently normal, no inflammation. Right ear canal normal, drum apparently normal, no inflammation. Teeth, all removed. Tonsils, small flat, and a small amount of muco-pus. Nose, nasal passage right, negative. Left, negative in anterior part. Posteriorly there seemed to be some fullness in region of middle turbinate. Breathed freely through both passages. Holmes pharyngoscope—Right, negative. Left shows small elevation between the posterior tip of middle turbinate running to just above the Eustacian tube. This is dark bluish in color with an area of congested mucosa around same. There is no ulceration though the overlying mucosa is rough and velvety in appearance and bleeds easily on being touched. The Eustacian tube is closed and mucosa swollen.

Considering the size of the growth it was thought advisable to attempt removal and follow with radium if it proved to be malignant.

On June 9th. under ether anesthesia the left middle turbinate was completely removed and with some difficulty the whole growth, as near as it could be determined was removed. Frozen section showed this to be small spindle celled sarcoma arising from periosteum.

Later he was advised as to the nature of the trouble and of the necessity of having radium

applications made. One week after operation, radium was applied in the following dosage: 100 mgm for 5 hours.

One week later this was repeated. He was allowed to go home and report in one week for another treatment. At this time there was absence of any growth and apparently a complete return to normal. At the end of that time he wrote me he was feeling fine and had a lot of work to do and would not return immediately. I wrote him to return as soon as possible for further treatment. A few days later I went on my vacation and returning some three weeks later I found he had not been back for treatment, and wrote him again urging the necessity for his returning. Three months later he came to my office about the first week in November complaining of severe pain in the head, left ear and free expistoxis at times. Examination showed the left posterior nasal passage filled with a growth and the whole left posterior space accluded. The left auditory canal showed a dark mass filling the canal to within ½ in. of the meatus. Any manipulation within the passage caused free bleeding. Radium was applied by means of needles in the mass at various points as follows: 60 mgm. for 6 hours in various locations in the mass.

This application was made one week later. He returned in three days showing a severe radium burn involving pharynx, pillars of fauces and soft palate. About this time there appeared an enlarged lymphatic gland just below the angle of jaw on the opposite side of the neck. He was given Coley's fluid and X-ray, without improvement. Numerous enlarged glands appeared in the neck and down in the supra-clavicular fossa on the right side. The left side showed gradual glandular involvement from the supra-clavicular orifice up the neck to the mastoid. These glands soon became as large as hen's eggs. The patient now began to have fainting spells in which his heart action was very weak, and he gradually grew weaker and weaker and died February 14, 1924.

Remarks: It seemed that the second application of radium after an apparent cure added fuel to the fire as the progress of the growth became very rapid and metastases occurred quickly. I had felt very hopeful that this case would get well or at least that progress of the growth would be delayed, but radium had apparently just the opposite effect.

Case 3. John L. Male, Age 48. C. C., Patient came to see me because of some impairment of hearing in the left ear, buzzing, ringing and a feeling of fullness in the ear, also would blow out small amounts of blood from the left nasal passage now and then. P. I. Began to have some trouble with his hearing four months ago but gave no particular attention to this until the loud buzzing and ringing began about two weeks ago, and lately some slight bloody discharge from the nose. Otherwise has not felt anything else such as pain, headache, etc. P. H. Shows nothing of importance. F. H. Negative. No malignancy in family. Examination,—left ear drum slightly retracted. Otherwise negative. Nose external negative. Internal nothing definite, could be seen on anterior examination with Holmes pharyngoscope passed through left side lens was immediately covered with blood and nothing could be seen. After further cleansing of nose and waiting a few minutes I passed the pharyngoscope through the right nasal passage and was able to make out a faint small bluish nodule with macroscopic veins on its surface occupying the space between the posterior tip of the inferior turbinate and the mouth of the Eustavian tube, encroaching on the tube. A good deal of swelling and congestion around the tube. The slightest touch of the probe and there was immediate bleeding which stopped, however, immediately. Apparently there was no ulceration of the growth nor was it very large and only for its location would probably have given no trouble other than some slight nasal bleeding on blowing of the nose.

Further examination of the sinuses and nasal passages were negative in every respect. There was no pain at any time nor did physical examination of the patient show any other organic lesion. The patient was well nourished, perfectly fit and strong with no idea that anything serious could be present.

Treatment: Feeling that this was an ideal case for the use of radium and that if there was any virtue in its use that surely here I would register a cure, I proceeded with its application in a most hopeful frame of mind.

With some little difficulty I managed to get four needles of radium each needle containing 10 Mgms. of radium making in all 40 Mgms. in to the ends and the middle of the growth. This remained in place six hours, was repeated again on the fourth day and again on the ninth. On the twelfth day the growth was about one-half the previous size and thus encouraged, I repeated the dose on the sixteenth day. Examination one week later showed no evidence of the growth but by means of a special holder I applied radium in a flat recepticle where the growthwasoriginally. There was entire disappearance of the

growth at this time. Two weeks later examination showed the same condition. The hearing had improved and the tinitus was subsiding rapidly. Feeling that he was getting well rapidly the patient decided to take a vacation unknown to me. At the end of about three months he reappeared in my office with the same symptoms.

Examination now showed a much larger tumor in the same area previously found, bleeding freely and with almost complete deafness in that ear.

Radium was again resorted to with apparently the same result as in the preceding case, apparent stimulation of the growth and rapid progress. About one week later a large gland appeared under the angle of the jaw on the left side. The opposite side soon became involved. General lymphatic enlargement in neck, clavicular region, axilla followed and death in a few days from metastases in mediastinum.

Case 4. A Chinaman, Aged 50. Presented about the same clinical picture as the above as to his early condition and whose growth disappeared under radium. This patient did not return to me and the end result is not known. At the time of his disappearance he was apparently well. However, my faith has been shattered in these apparent cures and I dare say he went the way of all my cases.

Case 5. Female, Age 12. C. C. Large swollen glands in post-cervical chain and under jaws both sides. Much pain on moving head on account of these glands. Epistaxis severe at times. Inability to breathe through nose. P. H. Measles, pertussis. One year ago fell striking nose against brick. F. H. Negative. Examination—Shows a thin emaciated girl holding head stiffly erect, walking carefully and with extreme rigidity. Two large and swollen glands of the post-cervical group on each side and one large gland about the size of a hen egg under angle of jaw on both sides and causing a great deal of pain. Examination of nose showed both nasal passages completely blocked about half way back with a dark bluish growth. A great deal of muco-purulent discharge on and around the growth with an offensive odor. The lightest touch of the probe caused free bleeding and it was with some difficulty that I could examine this growth, but as far as I was able, concluded the origin was in the naso-pharynx. Examination orally showed the soft palate depressed and the naso-pharynx completely filled.

Bleeding was free at all times and the examination had to be made at intervals. The patient would bleed at any time, frequently would be awakened at night with a hemorrhage and it was with difficulty that it was controlled.

P. I. Began one year ago with small hemorrhage from the nose and mouth. No attention was paid to this as it was felt by the parents that this was the usual nose bleed of children and did not call for an examination. She later began to have some difficulty in breathing and the parents were casually told that the child probably had adenoids and to have them removed which they intended having done at some convenient time. Not until nasal breathing was almost gone and the small lumps appeared in the neck was a physician seen again and still nothing was done except a nasal spray given. Progress was very rapid and when I finally saw her there was no hope for relief.

Treatment: Was directed toward the relief of pain and control of hemorrhage. Coley's fluid was given in small doses with severe reaction, and X-ray treatments. Radium needless applied within the nose in the growth with much improvement in the size and the hemorrhage. The patient died however in a very short time from general infection. Pathologic report: Small round cell sarcoma.

Case 6. Female, Aged 50. C. C. Nasal hemorrhage severe at time. P. I. Began two months ago. Has had several attacks of epistaxis brought on usually by blowing the nose. Occasionally is spontaneous. No pain but stopping of nose. P. H. Usual diseases of childhood. No other trouble. F. H. Negative. Examination: Far back near the posterior tip of the left inferior turbinate was seen a small vascular growth which bled rather freely upon manipulation. Thinking this might be an angioma I removed it and most of the turbinate with scissors and snare, then cauterized the exposed area thoroughly. Pathological report: Fibro Sarcoma. Result, patient has had no return of the growth in over one year. She is still under observation and will continue so for at least two more years. Fibro-sarcoma not being very malignant yields very nicely to radium and many cures have been reported of this condition.

With the exception of this case, the other five cases, three definitely and the other two as far as could be determined, had their origin in the naso-pharynx and in two instances progressed forward to fill the posterior nasal chambers.

In the early cases, depending on its location near the orifice of the Eustacian tube symptoms consist of impaired hearing,

tinitus and spontaneous hemorrhage, the most prominent of which is the last.

Later there develops pain on that side, increasing deafness and enlargement of the lymphatic glands, aural discharge, stuffy obstructed breathing through the nose; repeated epistaxis always demands a thorough nasal examination in all cases regardless of whether it appears harmless or not.

Treatment: In two cases, mainly surgical, followed by radium, x-ray and Coley's fluid.

In three cases radium and Coley's fluid alone was used.

From a study of the literature it seems apparent that radium gives us our best chance to improve these patients. Many striking examples of a rapid disappearance of the growth following the application of radium, and apparently all traces of malignancy have disappeared, only to reappear in the course of a few months and progress rapidly to a fatal termination despite the frequent use of radium repeated. In fact the second application seems to stimulate the growth rather than to inhibit.

Dr. James C. Beck in a careful analysis of a large group of malignant cases of all descriptions and with various forms of treatment such as X-ray, radium, fulguration, autolytic solutions in connection with surgery and chemical agents such as Colloidal, Copper, Silver, and Eosin compounds, says in his conclusions. "I fully realize the greatness of X-ray and radium as to the possibility of curing malignant diseases, but it has not fully demonstrated its value."

Dr. Dighton in the British Journal of Surgery says "In Sarcoma of naso-pharynx all methods of treatment have been tried and many operations invented with but little if any success.

In conclusion I wish to say that I fully realize that I have added nothing to the treatment of sarcoma of the naso-pharynx, but I hope that this paper will serve to impress upon you the necessity of an early diagnosis, for it is upon this that our hope for a cure will largely depend.

I will feel amply repaid if in the discussion my own short comings in the management of these cases is brought out, and I earnestly desire to learn from you who have perhaps had more successful results in the treatment of these cases. As for me the utter hopelessness of these cases when I see them has been indeliably impressed upon my mind.

Broad shouldered, sturdy limbed, superbly made;
Conscious of power and unrestained grace;
Accustomed confidence upon his face;
Magnificent, untroubled, unafraid,
He came. It was so small a thing. He made
A jest of it—a tiny crimson stain
Upon his handkerchief. And in disdain
Spoke of so slight a trouble thus displayed.

Too late he came, Sarcoma—with a sigh
Stifled, I put away the instrument,
Shuffling my customed things the while, I bent
My head to hide the pity that my eye
Would have betrayed. Knowing that soon the high
Courage of him must fail—down the long aisle
Of suffering he'd go—constrained the while
"To droop, to dream a little, and to die."

Unvisioned yet, but waiting to be found
Some hidden light will rift the solemn gloom
That hitherto has mocked the most renowned.
And we who helpless stand and read men's doom,
Some day with wider knowledge will apply
A cure, while now we only watch them die.

MAJOR DEFECTS, EYE, EAR, NOSE AND THROAT AS SEEN BY THE MEMPHIS MARINE RECRUITING STATION*

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In studying the statistics of the Marine Recruiting station in Memphis for a twelve month period one is struck by the astonishing percentage of rejections that are made on abnormalities of the Eye, Ear, Nose and Throt. A Medical officer is in charge of the examination work, and the examinations are far more thorough than most examinations for life insurance. The applicant is stripped entirely and a thorough inspection is made of the skin, general contour, shape, size, proportion of various parts, symmetry and so forth. Then the examination is taken up, each part separately, and a great deal of care is exercised. We have never made the examinations, but in order to get the true facts in the case for a Parent-Teachers Association meeting, we have observed the work carried on.

Rejections are made on the major defect, that is, the abnormality that would handicap a soldier most is given as the cause of rejection. Mention is made of any minor ailments so that a man may be given an opportunity to clear his physical condition, if possible, and return for another examination. It seems a rather good class of men apply for Marine Service, and they often are operated on after finding that the physical condition is not sufficiently good to enter then, and return later.

During the year of 1921 five-hundred and nineteen men applied for Marine Service at the Memphis Station. One hundred and twenty-eight were passed and three hundred and ninety-one were rejected; over seventy-five per cent of rejections. Forty-five or nine per cent of rejections were made on eye defects as major defects. Fourteen or two and seven-tenths per cent were rejected on ear defects. Three or one half of one per cent were made on nasal deficiencies. Tonsils and adenoid disease combined with underweight totaled one hundred and forty-five or twenty-eight per cent of rejections. In 1924 three hundred and seventy-nine applicants were rejected at this station. Fifty-two or thirteen and seventy-two one hundredths per cent were rejected on eye abnormalities. Ear diseases caused a rejection of seventeen or four and forty-eight one hundredths per cent. This data for 1924 came on hurry request from Washington and the nose and throat figures were left out supposedly (on my part) because "underweight" was so mixed with this bit of information that it could not be hurriedly separated.

From the 1921 figures we are led to believe that the nose is not as carefully examined as the eyes, or ears, or throat. We see a much greater percentage of sinus disease alone in the ex-service men than one-half of one per cent. I am led to believe this because there are several hundred sinus operations annually at the U. S. Veterans Hospital No. 88 and it is a three-hundred bed hospital.

The above are listed as major defects and forty per cent of rejections in 1921 were made on diseases, deficiences, abnormalities of the eye, ear, nose and throat. And the examining doctor tells me that most of these abnormalities in these particular organs are largely correctable during childhood. This may be done by co-operation of parents, teachers, and family doctors. Parents should be taught that it is most necessary to induce the child from infancy up to keep the mouth closed and to breathe through the nose even if obstruction exists in the form of temporary swelling of the nasal mucosa. This we always have in acute cold.

*Read before the Mississippi State Medical Association, Biloxi, May 12-14, 1925.

Breathing through the nose will prevent excessive growth of adenoid tissue and at the same time enlargement and infection of the tonsils; the former by the positive and negative air pressure of expiration and inspiration, the latter by keeping the unwarmed, dust-laden air from passing directly into this area. This latter produces dryness and congestion of the throat, permanently enlarging the tonsils. No effort on the part of the chest muscles is required to get the air into the lungs by this route and the chest becomes more or less undeveloped, then the lungs are not well aerated, especially at the apices. The negative pressure of inspiration causes less blood to be sucked into the lungs. Air entering the lungs is cold, unmoistened, and the lining membrane is predisposed to inflammation. This is a part of the vicious circle that results, and I mention it because over thirty per cent of the above studied rejected men suffered in this way.

In this connection I might say that the Army Recruiting Station in Memphis rejected seventeen and one-half per cent on eye, ear, nose and throat defects. This station has no medical officer. A Medical Department Seargent makes the examinations, and he tells me that a great many that he passes on are rejected after reaching a station where there is a medical officer. For the whole corps area over twelve per cent were turned down on defects of the organs in question after having an examination by a medical officer. This makes an approximate total of thirty per cent for the Army. Some get by even at that. Now we are having thousands in the U. S. Veterans Hospitals, and many more thousands drawing compensation for defects that existed prior to entrance into the Army or Navy Service.

An article under "Current Comment" appeared in the Journal of the American Medical Association, issued January 17, 1925, on this subject. The statement is made that twenty-nine per cent of rejections were made by the Draft Boards of certain cities during the World War. We all know that many defectives were taken. This article gives the largest percentage as rejected on unacceptable conditions of the eyes, this percentage was six. In the same article mention is made of a recent U. S. Public Health Service examination of one thousand school children, aged six to sixteen. Only ten per cent of these little fellows had rather poor vision in one or both eyes. What is considered poor vision is not stated, but a man must have twenty-fortieths in each eye to enter the Army and twenty-thirtieths in each eye to enter the Marines.

A great deal of talk is heard of periodic health examinations. Dr. W. D. Haggard, President-Elect of the American Medical Association, made his address at the recent meeting of this body, on this subject. Frequent examinations of everyone, but especially children should be carried out. Let's do it without talking about State Medicine.

DISCUSSION.

Dr. Lon W. Dotson (West Point)): The paper of Doctor Harris is very interesting from the standpoint of statistics. The striking part of the paper to my mind is the small percentage of nose defects—only one half of one per cent. When I was doing eye, ear, nose and throat work on the medical advisory board of my district, we surely had a greater percentage of nose defects than that. That is probably due to the fact that examination of the nasal chambers is a little bit more difficult to make thoroughly than to look into the throat or ear. In order to make a nasal examination satisfactorily one must use some l o c a l astringent, transillumination, perhaps X-ray, and a nasal pharyngoscope to see the true condition, and as the Doctor brought out in the paper, there are many cases in the various Government hospitals today that are being treated for sinus disease and nasal defects that were chronic and overlooked at the time these men were induced into service, and from an economic standpoint this is very expensive for the Government.

I note the Doctor gives 28 per cent. of rejections on account of adenoid and tonsil disease. This should not be. If we could institute a more thorough examination through the co-operation of the health officers and the doctors in the local

communities, we surely could educate the people to have these defects remedied, because as the doctor brought out in his paper, there were 40 per cent. of rejections of all cases due to eye, ear, nose and throat disease, more especially throat disease and eye conditions due to error of refraction. As a matter of course, there is a certain limit in which they must have eyesight before they can be induced into service, and the majority have sufficient eyesight, or it can be remedied with proper fitting glasses, but as I said the striking feature of the paper is the small percentage of nose conditions, given as a cause for rejection, which I believe must be due to the examination. I believe that more earnest co-operative efforts from these men who are being inducted into the service, and if the examinations were made more thoroughly, that could be cleared up. I appreciate Doctor Harris' paper very much.

Dr. E. F. Howard (Vicksburg): I am sure that a good many of you are a little startled at the percentages Dr. Harris has given, but I want to assure you that you have no reason at all to be. I happen to have had some experience in that same sort of work in 1917. Remember, we were handling men who had already been culled out by the Examining Board, and in the Illinois Division we got 3 per cent. for ear defects alone, remember, too, that we were handling only irremedial defects. If a man could be put in shape, we were supposed to take him into the Base, but we canned 3 per cent, with defects that absolutely could not be remedied. I am not in position to give you the ocular defects, because I was not doing that end of the work.

Dr. Robin Harris (closing): It occurs to me to wonder if there are 40 per cent. rejected on account of eye, ear, nose and throat defects, what the others were rejected for. The medical officer in charge told me that these ear defects were largely dependent on tonsil and adenoid disease also. I thank you very much for your discussions.

THE SIGNIFICANT PATHOLOGY OF SCARLET FEVER AND ITS PREVENTION.*

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Scarlatina is essentially a toxemia caused by a specific hemolytic streptococcus and characterized by special tissue changes in a number of the important organs of the body. While the angina, pneumonia, exanthem and myocarditis are frequent lesions they are not as significant or as important as are the injuries which occur to the kidneys. The renal injury is not only a constant accompaniment, occurring as it does in the mild as well as the severe forms of scarlatina, but it affects more especially that part of the excretory tissues known as the glomeruli. Although impairment of kidney function may, during the infection, be relatively little and of no clinical significance, structural changes are in consequence occasioned which may result later in permanent disability of the organs. Furthermore, the wrecking of renal function during the active stage of the infection is more often the cause of the mortality than is the pneumonia or the myocardial degeneration. Death from nephritis also occurs as a complication, and not infrequently in what the physician regards as the post-scarlatinal period. It is my opinion that the kidney lesion in scarlatina is the essential pathology of the disease. This paper, therefore, considers the nephritis of scarlet fever and its likely consequences subsequent to the acute infection.

Pertinent to the subject is the fact that in cases of scarlet fever, even in mild forms, there is a concomitant parenchymatous nephritis, which presents pathological features that justify signaling it out from other acute nephritides. The great probability that the nephritis of scarlet fever is one of the forerunners of that entity known as Bright's disease, makes it all the more important from a therapeutic aspect.

The earliest recognizable structural change in the kidney of scarlatina occurs to the glomeruli and is characterized by a multiplication of the surrounding capsular epithelium which slowly but surely crowds out or obliterates the most important part of the functioning unit, namely,

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*Read before the Louisiana State Medical Society, New Orleans, April 21-23, 1925.

the whorl of capillaries known as the glomerular tuft, in consequence of which these important vessels become thrombosed and the tubular lining cells undergo degeneration. Here it should be mentioned that the specific toxin of scarlet fever has apparently a selectiveness for the capsular epithelium. The changes in the tubules and capillary vessels are the result of the capsular lesion and not that of the direct action of the toxin upon them. The capsular lesion is responsible for all subsequent changes, both functional and structural, to the parenchyme of the kidneys.

Later with the collapse of the tubules there is an attempt on the part of the supporting tissues to fill the void made by the loss of tubules. In scarlatinal nephritis, unlike other parenchymatous nephritides, there is no regeneration of tubules because of the previous destruction of the capillary tufts. This point I especially desire to stress since it explains the occurrence of the chronic diffuse nephritis that follows months or years afterwards; and its relation to the previous scarlatinal nephritis. Tubular epithelium is not regained for any kidney unit in which the glomerular vessels have ceased to function.

Obliteration of tufts entails the loss of tubules and this results in the production of replacement tissues which is of a character totally incapable of carrying on kidney function. Not only is the replacement tissue a poor substitute but it causes the destruction of perfectly healthy adjacent tubules and tufts that become accidently enmeshed or caught in the reparatory process. Thus a vicious circle is established and there is inaugurated a chronic interstitial nephritis, non-inflammatory in character, which is slowly and insiduously progressive. As times goes on more and more tubules and tufts are destroyed through the mechanical interference with their function by the steadily encroaching replacement tissue which by virtue of its objective continues to increase.

Here it should be said that it is by no means inevitable that the occurrence of an acute scarlatinal nephritis should result in the production of a progressive chronic diffuse nephritis. I believe this happens only in the cases where the severity is such as to cause destructive changes to the kidney tufts. Of course this does not always follow in the severe cases of scarlet fever, though it just as often occurs in the mild forms of the disease. Furthermore, we know that the acute scarlatinal nephritis may be purely the result of functional derangement, without there being any structural change either during the course of the infection or subsequent thereto. However, it is my opinion that this is the exception rather than the rule.

No definite symptoms need accompany the acute stage of the nephritis. These naturally depend upon the number and extent of the injury to glomeruli and tubules. The first symptoms are indicative of the failure of the unaffected and compensating kidney units to take care of the extra burden of work thrown upon them. It does not follow that the early clinical signs of nephritis mark the beginning of functional or structural changes in the organ. No symptoms are produced until a point is reached where the burden of daily work is disproportionate to the capacity of the functioning kidney tissues. Tufts and tubules that have reached the stage of common place wreck no longer play any part in the symptomatology of the disease. Functional disorders may be relatively great without there being any structural changes, and without giving rise to symptoms of nephritis. Parts of the kidney unit have a variety of special functions which may separately become defective without our being able to suspect this from any change in their appearance. These functional disturbances for certain units, and complete loss of function for others, may occur in the toxemia of scarlet fever without any clinical manifestations. This simply means we have not learned to cor-

relate functional disturbances with structural changes that lead eventually to and are responsible for chronic nephritis.

A histopathological study of this form of nephritis (chronic diffuse) clearly indicates that the exciting cause is not a recent or existing infection of the kidney, but is the result of extensive repair tissue that has come in the course of time to replace the destroyed parenchyme. The causal factor produced its injury months or years before. Thus the processes, primary parenchymatous degeneration and secondary interstitial proliferation, are relayed and eventually there results a depletion of the necessary units for the carrying out of renal function. In consequence there appears for the first time symptoms of kidney affection. Chronic nephritis is the result rather than the immediate effect of specific injury. A very long time may have intervened between the primary injury and the appearance of symptoms of chronic nephritis.

It is no longer questioned that microorganismal poisons are responsible for the non-inflammatory chronic diffuse nephritides. We are coming to regard more and more the hemolytic streptococcus group as the indirect excitants of chronic diffuse nephritis, (Bright's disease). The basis for this belief lies in the fact that in this type of renal disease the lesion begins as a glomerular nephritis corresponding in microscopic detail to the experimentally induced kidney lesion with hemolytic streptococci. Furthermore, we now have positive knowledge of the cause of scarlatina nephritis which in the beginning is a glomerular lesion produced by the toxin of the specific organism of scarlet fever. That other excitants are responsible for chronic diffuse nephritides cannot be denied; however, it would seem that the hemolytic streptococci will eventually be proven to be the cause of the greater percentage of cases.

We do not fully realize the harm that may result to the kidney from extra-renal infections that are streptococcal, especially those of the upper respiratory tract where they are so often chronic or recurring. The intermittent absorption of tixic products from such foci of infection is sure to have ultmately its effect upon the kidneys. These organs by virtue of their function stand in closer relation to distant focal infections than do other organs, not even excepting the heart. Too much stress cannot be laid upon the importance of possible grave nephritides following the toxemias of focal streptococcal infections.

The infectious diseases of childhood, pre-eminently scarlet fever, have long been suspected as being the basis for certain grave renal insufficiencies that appear without apparent cause in the individual past middle life. Scarlet fever is now an outstanding example of the selectiveness of the hemolytic streptococcus for kidney tissue. Of course in the majority of cases there is clinically a complete recovery, but this does not mean that subsequently we will not have to deal with the result of that injury in the form of a chronic diffuse nephritis. While as yet we have no specific means for preventing the injury to the kidney that is an indirect result of some focal infection, we do possess an absolute preventive of the renal injury in scarlatina. I refer here to the recently discovered scarlatinal antitoxin which if administered early not only exerts a lytic action upon the streptococcal excitant but promptly and efficiently neutralizes the toxin, thereby preventing the specific injury to the kidney. I regard this preventive of the renal lesion the most important virtue of the antitoxin, because after all it is the acute nephritis of scarlet fever that accounts for much of the morbidity and most of the mortalities. The specific antitoxin has the same effect in preventing the nephritis of scarlet fever as diphtheria antitoxin has in protecting the myocardium in diphtheria. It is my firm convction that

with the use of the specific scarlet fever serum we will see in the years to come an appreciable decrease in the number of chronic diffuse nephritis, those in which the primary renal injury occurred during an acute infection of years before.

DISCUSSION.

Dr. J. B. Guthrie (New Orleans): One of the surprises that I received after graduating in medicine and starting to practice in New Orleans, was to see the discrepancy between the picture of scarlet fever as I read about it in text books and as I had imagined it to be, and what I actually saw here in New Orleans. Scarlet fever with us apparently is not the virulent disease that it is in certain other localities, neither in point of morbidity nor of mortality. We see many more mild types of scarlet fever than they do in the east apparently.

I have listened with a great deal of interest to what Doctor Duval has said in regard to the assurance he felt that in the absence of clinical symptoms during scarlet fever, that is clinical symptoms in the kidney, that even though no damage showed to the kidney, it would eventually break down. This is surprising to know. We clinicians are in the habit of thinking that we can tell what is going on in the kidney during the period of observation. We flatter ourselves that we have tests and means of observation that will tell us whether or not a nephritis is existing or going on, just the same as you know that a pneumonia has occurred, or that damage to some other of the important viscera is there. I feel in the absence of proof that Doctor Duval has failed to give us, that he may have in mind, the work done by somebody else, and for that reason did not give it to us in his discussion. If Doctor Duval told me that he had proof in his own work, I should accept the statement, but we see so many mild cases of scalet fever here, and we so oftentimes see that the kidney does not show any evidence or give any response such as we would expect in any other fever. Of course we all know that the most virulent acute nephritis occurs in scarlet fever, but I do not mean that; I mean where the kidney seems to be all right, where the clinical evidence is lacking as to the occurrence of nephritis. It is news that that damage must inevitably occur. We have to go to Doctor Duval here for information of that sort. For instance, we do know that diphtheria anti-toxin uniformly strikes the myocardium, and it is impossible to conceive of a diphtheritic infection of any severity that clinically does not present a certain amount of myocarditis. I suppose there is some sort of obscure nephritis that exists in this condition. I am not contradicting, I am simply giving my reaction to the statement in order to bring out discussion.

Dr. C. J. Bloom (New Orleans): I would like to ask the Doctor what he thinks about the particular serum as advocated by Dochez and Blake as compared with the anti-toxin as advocated by Dick and Dick.

Dr. H. P. Jones (New Orleans): My experience has been that where we have sufficiently carefully examined the urine in cases of scarlet fever, and the same is true of typhoid fever, or any disease in which you have most pronounced kidney lesions, that I have never treated a case of scarlet fever in which I thought I was not able to demonstrate some kidney irritation at one time or another during the course of the disease, and I believe that Doctor Duval's statement is correct, that every case of scarlet fever is essentially one of acute nephritis which may subsequently become Bright's Disease.

We have a great many cases of scarlet fever to treat at the Charity Hospital, and very often we are upset and perhaps misled by the claims of the commercial houses who have serums that is just as good as the Dochez or the Dick type. They do not say it is the same, but they say it is like it. We do not use the serums, but we do it conscious of the fact that we are not using the Dochez serum or the Dick serum, because I do not believe that until lately any one has had the Dick serum, certainly not in this community, for use even experimentally. I would like Doctor Dick to clear up that point and tell us what serum we had best use and if it is available.

Dr. R. T. Lucas (Shreveport): I would like to ask Doctor Duval whether, as in diphtheria, a single dose of anti-toxin is sufficient, whether you need to repeat it, and if so how often, and when do you figure it is not further necessary to give it?

Dr. Charles W. Duval (Closing): *In answer to Dr. Guthrie.* Scarlet fever is now known to be a localized infection of the pharygeal mucous membrane in which situation the specific streptococcal excitant remains and elaborates its toxin. The disease, therefore, is essentially a toxemia and in this and certain other respects is similar to diphtheria. The scarlatinal toxin apparently has a selectiveness for the parenchyme of the kidneys, more so perhaps than for any other tissues not even excepting the skin exanthem. In the kidneys the immediate effects are seen for the encircling epithelium of the

glomerular vessels, which multiply in the capsular spaces causing in time the obliteration and destruction of the capillary tufts. The prompt administration of anti-scarlatinal serum in adequate quantity will prevent the action of the toxin upon the kidneys by neutralizing it en route. In this way not only is the acute nephritis warded off but the subsequent kidney sequalae prevented.

In answer to Dr. Bloom. The Dochez scarlatinal anti-toxin is regarded as more potent than the Dick's product because in the former the unfiltered broth-culture is employed as antigen, while with the Dick's only the culture filtrate is used in the production of the immune serum.

In answer to Dr. Jones. Both the Dochez and Dick's anti-scarlatinal sera are obtainable from the various biological houses who manufacture anti-toxins for commercial use.

In answer to Dr. Lucus. Various laboratories are at the present time attempting the standardization of scarlet fever anti-toxin, and along the same line as was successful for diphtheria and tetanus sera. It will not be difficult to determine per cubic millimeter of blood the amount of circulating toxin in a given case of scarlet fever. With this data it will be easy to determine the amount necessary to neutralize a given quantity of toxin. In regard to the size and number of doses of scarlet fever anti-toxin, it depends upon a number of factors, more particularly the severity of the case and the length of time the disease has been in progress. The physician is governed here very much as he is in his curative serum therapy for diphtheria. Of course it stands to reason that the earlier the anti-toxin is administered the greater are the chances of toxin neutralization with smaller amounts of anti-toxin. Again the prompt giving of the immune serum prevents the toxin injury to the kidneys.

COMPLICATIONS INCIDENT TO THE OPERATIVE TREATMENT OF SIMPLE GOITER

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The causes, the prevention and the treatment of the operative and post-operative accidents incident to the surgical treatment of simple goiter are well worthy of study.

Goiters associated with hyperthyroidism, primary or secondary, the various types of suppurative and malignant neoplastic disease of the thyroid gland differ so much from simple goiter in etiology, pathology, clinical manifestations and therapeutic indications that they are outside of the scope of this paper. Aberrant goiters, cervical, lingual, endothoracic, etc., presenting additional and special dangers by virtue of their anatomical relationships, are likewise excluded.

A simple goiter may, at any time, become the seat of: (a) Hemorrhage. This may lead to a sudden and marked increase in the volume of the goiter, to cyst-formation or to extravasation of blood into the paratracheal, mediastinal and other neighboring regions. Any of these conditions, singly or collectively, can determine tracheal compression, obstructive dyspnea (1.19) and necessitate immediate surgical relief. (b) Abscess formation or diffuse suppuration. This may occur in the course of or after any of the infectious diseases; it may occur in the absence of any other evident constitutional disturbance (2). The advent of infection increases the pressure symptoms. (c) Malignant disease (3): sarcomatous or carcinomatous. Malignant disease occurs more frequently in goitrous than in normal thyroid glands (3b). (d) Degenerative structural changes, provocative of hyperthyroidism, hypothyroidism or dysthyroidism (4). (e) Inflammation. The processes of degeneration present in goiters lower the local tissue resistance and predispose to inflammation. The swelling inherent to inflammatory neoplastic and other degenerative processes of the thyroid gland exerts nefarious pressure on the trachea and esophagus. The severity of this pressure is determined largely by the size and location of the swelling, tumor or cyst.

The operative removal of goiters eliminates these potential dangers and has further advantages. It can and should be

strongly emphasized that intraglandular enucleation and subtotal thyroidectomy, each, give extremely good immediate and remote functional results. The trachea is freed from all abnormal pressure. Many of the disturbances of phonation and respiration occurring immediately after operation are temporary, normal function being restored in from a few days to several weeks. Operations for simple goiter, for goiter unassociated with hyperthyroidism, are not attended with more than the usual risks incident to all major surgigal operations. They give highly satisfactory cosmetic, functional and curative results, especially if surgical relief is sought before the patient has been subjected to repeated courses of iodine therapy and before the occurrence of degenerative visceral changes.

De Quervain (5) reports 2,200 operations for simple goiter with a mortality rate of .86%. For all patients up to forty years (1,682 cases), the mortality was only .06%. In patients under the fortieth year, these operations, performed according to the approved present-day technic, are practically devoid of risks. The risks increase rapidly thereafter; after the sixtieth year, in the absence of urgent indications, it is preferable not to operate.

Operative treatment is indicated in all forms of simple goiter, the goiter of adolescence, of pregnancy and of the menopause being excepted, if the goiter, by its pressure, causes: (a) Respiratory disturbances (bronchitis, pulmonary emphysema, obstructive dyspnea, asphyxia, etc.). In all patients presenting symptoms of obstructive dyspnea, early intervention is urgently indicated. (b) Circulatory disturbances. Many goitrous patients are cardio-vascular, cardio-renal defectives. "Every goitrous patient is exposed to asphyxia and to cardiovascular accidents" (11). "A goitrous patient is predisposed to myocardial disease" (12). (c) Nervous disturbances. "The paralysis of the recurrent laryngeal nerve which antedated the operation, in ten cases was not improved by the operation" (4). (d) Difficulty in deglutition. (e) In the presence of severe pain, of unsightly deformity, of rapid growth of the goiter. (f) If the goiter becomes excessively large, interfering with the patient's work, with his sleep in the recumbent posture. (g) If the goiter does not respond to medication. One should not lose sight of the dangers of non-operative methods. Hyperthyroidism has followed treatment by radium, by serum, by injections of boiling water, etc. As adenomata of the thyroid gland do not respond to medication, they should always be removed. Operation reveals the relation of the goiter to the other cervical structures, shows whether the goiter extends into the thoracic cage, around the trachea to the esophagus, etc.

Accurate and detailed knowledge of the origin and nature of the operative and postoperative dangers incident to intraglandular enucleation and to sub-total thyrodectomy acts as an incentive to early, to more timely operations and to the institution of surgical relief previous to the advent of local complications, previous to the development of degenerative visceral changes. The earlier the operation, the less the risks, the better the end-results. Timely operations skillfully performed will lessen the frequency and the morbidity of the accidents herein considered, will reduce the operative mortality and improve the end-results.

These surgical complications, avoidable or unavoidable, of minor or major importance, are due, in part, to the patient's unfavorable physical condition at the time of operation, to the use of a method of anesthesia not adapted to the case at hand, to lack of proper correlation of the anesthetic to the technic, to the operator's lack of technical skill, experience and judgment in surgery of the neck, etc. Owing to the study given to diseases of the thyroid in recent years, these accidents are now better recognized, better understood

and better managed. The main conditions that may confront the operator are: Hemorrhage, primary or secondary; injuries to the recurrent laryngeal nerve or nerves (compression, contusion, laceration, division); injuries to or partial or complete removal of the parathyroid glands (tetany); postoperative hyperthyroidism; excessive removal of thyroid tissue (myxedema) and postoperative infections. Chief among the uncommon complications are: Air embolism, collapse of the trachea, esophageal injuries, pneumonia and recurrence of the goiter. Complications, such as unilateral or bilateral division of the sympathetic and vagus nerves, injury to the pleura, etc., which we have not met in our private or hospital practice, we refrain from discussing.

Hemorrhage: It is of arterial, venous, capillary or mixed origin. In operating on goiters, we are operating in a very vascular region, on a vascular organ, an abnormally vascular organ. The thyroid gland presents extensive anastomoses not only between the vessels of the same lobe, but also between those of the different lobes. After ligation of the four thyroid vessels, the circulation is re-established through extra-glandular anastomoses (16). Serious hemorrhage may occur at the time of operation, immediately after the patient has been conveyed to bed or during the post-operative period.

At the time of operation, some hemorrhage is unavoidable. Profuse hemorrhage (5) must be guarded against; it is alarming and, if not controlled, may prove fatal. The vessels of a goitrous thyroid gland show a marked tendency to degeneration. They are dilated, their elasticity is impaired, they tear easily. In some cases, the cervical veins, especially those located at the lower part of neck, are dilated tremendously. The arteries show a thickening of the intima and degeneration of the elastic fibrillae. Care must be taken not to injure the internal jugular veins or the carotid arteries. During the operation, owing to the lowered blood pressure, small arterioles and venules may not bleed and thereby escape ligation or suturing. With the return of consciousness, the blood pressure rises and hemorrhage may occur. Immobilization of the operative region not being feasible, for the first two days following the operation, the patient is to be closely watched as violent coughing, violent retching, vomiting, too frequent change of position, undue activity can bring on abnormal intra-venous pressure followed by hemorrhage.

Secondary hemorrhage following thyroidectomy may be sufficiently serious to cause death. Chief among its causes are premature absorption, slipping or unknotting of unsecurely tied ligatures, erosion of vessel-walls, errors of technic such as faulty asepsis, overlooking of bleeding points at time of operation, delayed removal of drains, etc.

Hemorrhage manifests itself by pallor, rapid and superficial breathing, rapid and weak pulse; the dressings may be saturated with blood. If the hemorrhage be not checked, it leads to obstructive dyspnea, to asphyxia; it may result in collapse. The loss of blood in itself is a danger. Furthermore, the extravasated blood may exert dangerous compression on the trachea thereby giving rise to serious respiratory disturbances.

In cases of secondary hemorrhage, reopen the wound widely and carefully and rapidly remove all the blood clots. Locate the bleeding points and ligate the bleeding vessels at their divided ends; reunite the wound edges and apply appropriate dressings. After the hemorrhage has been controlled, if the pulse be alarmingly weak, give normal salt solution subcutaneously and rectally and also such medicinal agents as are indicated.

To lessen hemorrhage, primary or secondary, operative or post-operative, always (a) Operate in suitable surround-

ings, aided by competent assistants and as rapidly as is consistent with the indications, with the patient's safety. It is needless to employ a long and laborous technic. Celerity is an element of success. (b) Use an incision that gives an adequate exposure of the goiter. (c) Be gentle in all operative maneuvers. There should not be any needless traumatizing of tissues, any avoidable tearing of vessels, etc. The rupture of a large deep seated vein leads to troublesome hemorrhage and to an obscured operative field. (d) Secure thorough hemostasis. Keep the operative field as dry as possible from start to finish. Every bleeding point should be tied with catgut before the wound is closed. (e) Follow standard operative technic; knot all ligatures carefully, grasp and ligate veins as they are divided. It is not necessary to place a cart-load of hemostatic forceps on the patient's neck. In goiter operations, attempts permanently to control hemorrhage by compression, are unreliable. In the enucleation of adenomata, all dead spaces are to be obliterated by suturing.

Recurrent Laryngeal Nerve Injuries: The recurrent laryngeal nerves (2) are more commonly injured than is believed. They supply all the muscles of the larynx except the crico-thyroid. Dubs (21), in 840 goiter operations, reports twenty-six cases of recurrent nerve injury. Capelle (17), in 1,700 bilateral resections, had 1.3% permanent injuries of the recurrent laryngeal nerve. In operations on goiters, the branches or trunk (26) of one or of both nerves may be clamped, compressed, contused, stretched, lacerated, torn, included in a ligature or divided. Post-operative paralyses of these nerves are occasionally due to their inclusion in scar tissue, to their compression by inflammatory exudates or to the retraction of cicatricial tissue. The pareses or paralyses caused by injuries of the superior laryngeal nerve are not so manifest, not so significant as those due to recurrent nerve injuries and will receive here no further mention. An injury of the recurrent laryngeal nerve may be symptomless, may escape detection. It may first be detected by mirror examination of the larynx and may have only slight appreciable effect: a change in the pitch of the voice, more or less permanent hoarseness, slight difficulty in breathing, etc. When a uni-lateral nerve injury is not compensated by the uninjured vocal cord, aphonia, obstructive dyspnea and other symptoms result. "The complete restoration of phonation and respiration to normal occurs with restoration to normal of the muscles and cord on one side" (8). Normal voice is restored through compensatory efforts of the normal cord.

Vocal cord paralyses of operative origin result from stretching, clamping, tying, or division of recurrent laryngeal nerve or nerves. Traumatic injuries unassociated with complete nerve division produce symptoms of a temporary character, symptoms which in time disappear (13). Injuries involving both recurrent nerves constitute a serious complication. If both cords assume the cadaveric position, there follows a permanent aphonia and later an obstructive dyspnea which, if unrelieved, may be a contributing or decisive factor in the patient's death. Complete division of both nerves has resulted in death from deglutition pneumonia.

Preoperative mirror examination of the larynx gives the examiner exact and positive information concerning the state of the vocal cords (9); it is a protection to the physician and to the patient. Previous to operation, one cord may be found to be motionless. When one nerve is paralyzed. the patient depends solely on one cord for phonation and normal respiration; in these cases it behooves the operator to be most careful not to injure the opposite and unaffected nerve.

The recurrent laryngeal nerves are found posterior to the capsule of the thy-

roid gland, along the side of the trachea and in the groove between it and the esophagus. By scrupulously respecting the posterior capsule with which the nerves are intimately associated, the recurrent laryngeal nerves, always, and the parathyroid glands, almost always, will remain uninjured. The recurrent laryngeal nerves and the parathyroid glands are most surely avoided by leaving the region they traverse entirely unmolested and by not removing the posterior mesial lower part of each lobe of the thyroid gland. Gentleness in the use of hemostatic forceps, in the insertion of sutures and in the handling of tissues tends to lessen the incidence of nerve injury. Rough attempts to shell out, to drag out a deep seated goitrous gland may so stretch the recurrent laryngeal nerves as to cause paralysis of both vocal cords. The nerves may be pinched by a hemostat with other tissue, may be included in a ligature. Some operators, in resecting the lobes of the thyroid gland, proceed from within out. At the time of the patient's discharge from the hospital, re-examine the larynx and determine the presence or absence of any incompetency of the vocal cords.

After subtotal thyroidectomy, loss of voice of varying degrees (8) is due to one or more of the following factors: (a) Change in position of the laryngeal muscles and cartilages, due to the removal of the goiter and the consequent shifting of the displaced larynx back into its normal place. (b) Edema, obstructive or inflammatory, of the laryngeal and peri-laryngeal tissues. Keep the line of dissection away from the trachea and larynx thereby saving more tissues about these structures and preventing the swelling from extending to the mucous membrane. The laying bare, the denudation of the trachea predisposes to severe bronchitis and endangers somewhat the recurrent laryngeal nerves. In catching bleeding vessels on the surface of the trachea, include in the ligatures as little as possible of the perivascular tissues. These tissues contain the sensory nerves to the trachea and their irritation causes cough and increased secretion of mucus. (c) A true myositis. (d) Trauma of the recurrent laryngeal nerve. (e) Prolonged interference with function.

Pemberton, in discussing postoperative obstructive dyspnea, says: "The routine laryngeal examination of all patients before and after operation and the careful search for a traumatized recurrent laryngeal nerve in all cases of obstructive dyspnea coming to necropsy, has clearly demonstrated that the cause of fully 90% of all cases of marked postoperative obstructive dyspnea is due to a paralysis of one or both vocal cords, the result of an injured inferior laryngeal nerve."

If the vocal cords be in the middle line position, the same author suggests one of the following three procedures: (a) Permanent tracheotomy. This has obvious disadvantages. (b) Removal of a portion of one vocal cord and of part of the ventricle. This may result in aphonia; it may give only partial relief. (c) The descending branch of the hypoglossal nerve has been anastomosed to the inferior laryngeal nerve (Frazier). This procedure is difficult and is, as yet, only in the experimental stage. Crile (14) advises that the vocal cords be clipped in the center of their free margins, leaving a free space for the passage of air.

Postoperative Tetany: The parathyroid glands, four in number, two on each side, are, as a rule, located posterior to the capsule of the thyroid gland and lateral to the esophagus. These glands, inconstant in number, irregular in location, have a function which appears distinct and separate from that of the thyroid gland. Their physiological importance is out of proportion to their small size. The anatomical integrity of these glands is of essential importance to the human organism. Numerous theories concerning the function of

these structures have been advanced. They are said to regulate muscle tonus, to form a part of the detoxication metabolism of the body and to control calcium metabolism (24). Calcium metabolism enters into many medical problems.

The prophylaxis of postoperative tetany presents difficulties due chiefly to the irregularity in number and location of the parathyroid glands. According to most anatomists, the parathyroid bodies receive their blood supply (15) from tributaries of the superior and inferior thyroid arteries and from anastomotic branches of the esophageal arteries. Postoperative tetany is infrequent. It can be caused by any interference with the blood or nerve supply of the parathyroid glands which may follow direct trauma, pressure from obstructive or inflammatory edema of surrounding parts, contraction or retraction of scar tissue or by removal of one or more parathyroid glands. The parathyroid glandules, after interference with their blood supply, do not resume their function and the manifestations of tetany do not come to an end before the collateral circulation is re-established.

De Quervain (25), in 2,203 goiter operations, never had a case of pronounced tetany. He observed symptoms of slight functional disturbance of the parathyroids in only three patients. The best technicians take great care neither to traumatize nor to remove any of these glandular bodies. Injury and removal of the parathyroids can almost always be avoided by leaving a layer of glandular and capsular tissue undisturbed at the back of the thyroid gland. This same precaution protects the recurrent laryngeal nerves.

The deficiency of one or two parathyroids may not cause hypoparathyroidism. Nevertheless, if a parathyroid gland be accidently removed, it should be transplanted at the close of the operation, preferably beneath the remaining thyroid lobe. Be sure of the nature and state of the transplant. We advise this because the actual condition of the individual glands is not known, as they are often rendered useless by hemorrhage or degenerative changes.

Eiselsberg (17), in 2,373 goiter operations, records six deaths from tetany; six other patients developed chronic tetany. Knaus (18) reports 619 goiter operations. Five of these were followed by tetany; three recovered and two died. As the operation is nowadays usually bilateral and less radical and because surgeons have come fully to realize the value of preserving some part of the thyroid gland on the posterior capsule, injury to the parathyroids is of very infrequent occurrence. Leave the posterior capsule; do not remove it.

Parathyroid insufficiency may appear any time from six hours to three or four months after operation (20). It almost always manifests itself by circumoral pallor, by a tight glossy appearance of the skin of the forehead, nose and face, by a sensation of stiffness in the fingers, by carpopedal spasms, etc. It is difficult for the patient to raise his fingers to his mouth or to hold anything. The lowered calcium content of blood serum or plasma causes exaggerated nervous irritability (Mac Callum). These symptoms pass off in a few hours or a day, possibly after one or two doses of morphine or the condition gradually progresses until the contractions involve the muscles of the hands and arms; sometimes the contractions become general. If, in the course of goiter operations, injury or removal of the parathyroid bodies be avoided, tetany will be a rare complication and occur only in its slightest forms.

Postoperative tetany is treated as follows:

(a) By restoring the calcium content of the blood serum to within normal limits. This is effected by administering calcium lactate, gr.xx every four hours until relief is obtained. It is to be given orally, by

enema, subcutaneously and exceptionally, intravenously and in larger doses, if necessary. The calcium lactate should be given in water and continued as long as the patient shows symptoms of nervous irritability such as Chvostek's and Trousseau's signs.

(b) By transplanting human parathyroids. The parathyroids used are obtained from fatal accident cases and from normal infants who have died during delivery. These transplants are difficult to obtain, are readily absorbed and of service to the organism (15) while the remaining parathyroids undergo compensatory hypertrophy or the injured or diseased ones recover. Transplantation may be made in the left abdominal wall between the peritoneum and the rectus muscle. Should the patient later submit to an operation for appendicitis, the transplants will not be disturbed. Some operators embed the grafts in the supraclavicular fossa beneath the cervical fascia. The microscope enables one to determine whether or not the transplant is unquestionably parathyroid tissue.

(c) By the various parathyroid serums in the market.

(d) By the ingestion, orally, of parathyroid products. Lahey (11) and others dispute the therapeutic value of parathyroid extracts.

(e) By medicinal therapy largely symptomatic in nature. Chloral hydrate per mouth or per rectum, repeated as needed; morphine sulphate; magnesium sulphate in 25% solution subcutaneously (15,20). Have patient drink plenty of milk and avoid all kinds of meat.

Air Embolism: It is a possible, though a very uncommon complication of operations about the neck. Many active surgeons possess only a theoretical knowledge of the condition. Among its predisposing etiological factors should be mentioned: The restlessness of patients operated upon under local anesthesia, great loss of blood and wounds of valveless dilated veins. From the prognostic standpoint, owing to its rarity, it is almost negligible.

If during inspiration air is sucked into a wounded vein and carried to the right heart, there is usually produced a peculiar whirring or churning sound synchronous with the cardiac systole. The danger of this complication is in direct ratio to the quantity of air aspirated and to the rapidity with which it enters the veins. If dangerous symptoms or death do not immediately follow the occurrence of air embo'ism, the accident need not cause the surgeon any further worry. A few cases of temporary paralysis due to air embolism are recorded in the literature.

Treatment: Prophylaxis is the watchword. To lessen its incidence, keep in mind its possibility, minimize hemorrhage, avoid rough handling of tissue, keep patient in the horizontal recumbent position during the entire operation (the sitting posture favors the development of air embolism) and doubly ligate large veins before dividing them (23).

As soon as this accident occurs, to prevent further aspiration of air, elevate the foot of the table, tampon and flush the wound with normal salt solution. While the tampon is being cautiously removed, clamp the wounded vein or veins and ligate them. Artificial respiration may lead to more air aspiration and therefore is not to be practised. Naegele, Jehn and others use forced inhalation of oxygen.

Tracheal Collapse: Long continued, unilateral or bilateral, pressure of voluminous goiters can determine either a loss of elasticity, a softening, an atrophy or an almost complete disappearance of the cartilaginous tracheal rings. In these cases, the trachea, after losing the support afforded by its attachment to the thyroid gland, sometimes persists in kinking and in collapsing at the close of the operation. There is no danger of tracheal collapse if the tracheal rings are normal. Many fac-

tors enter into the causation of tracheal flattening and collapse: The patient's age, the goiter's histological structure and consistency and, especially, the long continued traction or pressure exerted by the goiter as in the scabbard trachea.

Collapse of the trachea causes obstructive dyspnea, amounting in some cases, to asphyxia. With increased violence of the inspiratory efforts, there results a more complete mechanical obstruction to respiration.

Tracheal collapse may be fatal (3 b) in extreme cases, it may necessitate a tracheotomy (23). It may take days, even weeks, for the trachea to recover its efficiency. In about six months, complete recovery usually takes place.

Treatment: By means of a sharp tenaculum inserted on each side of its collapsed portion, the trachea is drawn forward. Should it persist or show signs of recurring collapse, fasten, by a few catgut sutures (stay sutures), the sides of the trachea to the surrounding tissue or fix the resected goiter stumps to the under surface of the sternocleidomastoid or omohyoid muscles and thus secure the tracheal dilatation and prevent recurrence of the collapse. Avoid perforating, by needle or tenacula, the cartilaginous rings or the entire thickness of the tracheal wall and thereby eliminate such complications as necrosis of tracheal rings, wound infection, etc.

Tracheotomy is rarely indicated. In twenty-three cases of tracheal collapse due to tracheomalacia, Czermak performed it only twice.

Recurrence of Goiter: Recurrence of goiter and recurrence of symptoms are noted in a small and decreasing percentage of cases. The portion left, the opposite lobe or the isthmus, may hypertrophy. It is most frequent within the first five years after operation (22). Recurrence causes symptoms chiefly when bilateral. Some recurrences cause only cosmetic defects. After enucleation, cysts or adenomata of new formation have been observed. Dubs (21), in 840 goiter operations, reoperated fifty-three patients in each of which the recurrent goiter visibly and palpably exceeded the normal consistency and size of the thyroid gland.

If the operators underestimate the amount of gland tissue to be removed, if the blood supply of the tissue left is not sufficiently shut off, if the primary cause of the goiter persists, if focal infections are left untreated, recurrence is more probable. Recurrences become fewer as the surgeon's experience increases.

In general, the amount of tissue to be left should be the functional equivalent of a normal gland. Postoperative prophylactic treatment: The use of boiled drinking water, orange juice, the suppression of all foci of infection (teeth, tonsils and others), etc., is very important. I follow the practice of Crile (20) who believes that, by giving minute doses of iodine for not less than one year after thyroidectomy, recurrences are prevented. In this connection, keep in mind that some patients are iodine-refractory and others are iodine-susceptible. Operation on a recurrent goiter is more dangerous than the primary operation on account of the necessity of preserving an adequate amount of gland tissue and of the presence of cicatricial adhesions.

Postoperative Hyperthyroidism: Owing to the present-day combined medical and surgical treatment of goiter cases, postoperative hyperthyroidism is infrequent. According to the latest researches, it follows the entrance of glandular elements and ferments squeezed out of the gland into the circulation. The absorption of thyroid secretion, during the operation and afterwards, also takes place through the wound surface. The patients are seized by a psychic storm, usually of an agitated maniacal type, there is restlessness, ac-

celerated pulse-rate, reaching 150 to 160 per minute, elevation of temperature (105°-106° F.), disturbed cardiac action, etc.

The frequency and severity of postoperative hyperthyroidism are lessened by observance of the following precepts: Operate as rapidly as consistent with the patient's safety and the completeness of the operation, secure perfect hemostasis, avoid squeezing of the gland and all needless traumatizing of tissue, make ample provision for drainage and see that oozing blood and effused thyroid secretion escape easily and do not remain in contact with the wound surface.

Drainage relieves tracheal compression due to postoperative hemorrhage and prevents hematoma formation. After all goiter operations, give large quantities of normal salt solution subcutaneously and rectally. By this practice the absorption of thyroid secretion is lessened and general elimination is increased. For the high temperature, the cold pack is most serviceable.

Postoperative Myxedema: Total thyroidectomy, having been frequently followed by myxedema, is now no longer performed. In goiter operations, hypothyroidism will not result if a small piece of thyroid tissue with adequate blood and nerve supply is left. "The old procedure of removing one lobe is inadequate. The old dictum that one-fifth of the thyroid mass should be left is equally unsatisfactory" (27). If we leave a quantity equal to about one-fourth of the healthy gland, symptoms of thyroid deficiency will not develop. In the individual case, the quantity of gland tissue to be saved is to be left to the surgeon's judgment. He alone has a thorough knowledge of the patient's condition. This is essential to determine when and what to do rather than where and how to do it. Some operators leave small masses at each horn of the organ and, in addition, a thin layer of thyroid tissue attached to the posterior untouched part of the gland capsule. These masses are well supplied with blood and lymphatic vessels and can, if needed, undergo compensatory hypertrophy.

In postoperative myxedema, there is impaired memory and intelligence, there is apathy, somnolence, great disinclination to effort. An edematous swelling of the skin develops and the patients complain of feeling cold. In young individuals, the growth is stunted. Hypothyroidism is characterized by a definite reduction in the basal metabolism; the metabolic rate is always lower than that of normal individuals of the same age and sex.

The successful management of these cases is one of the noteworthy triumphs of organotherapy. Intitute treatment at the first appearance of symptoms. Make up the deficit of thyroid secretion by thyroid treatment. In directing and guiding thyroid administration, metabolic rate determinations are of the greatest importance. Bring the patient's metabolism to normal and ascertain the dose necessary to keep it there. The patient is to be given iodothyrin or another suitable preparation of thyroid gland or the patient may be fed gland substance. The active principle of the thyroid gland, thyroxin, may be given intravenously. Thyroid gland tissue has been implanted. The treatment by organotherapy is to be continued for weeks, for months and thereafter is continued intermittently for some time; it may have to be continued for many years. In course of time, the symptoms of thyroid deficiency usually subside and may permanently disappear.

Postoperative Infections: Despite careful asepsis and perfect hemostasis, every now and then postoperative infections occur. They usually come from without, exceptionally, from within. In their causation, local tissue resistance and the individual's general resistance are not negligible factors. In the space remaining after removal of the

goiter, blood and wound secretion easily pool and are prone to infection.

The indication is self-evident. Let your technic be flawless. Do not wound the trachea or the esophagus; these wounds are often followed by infection of neighboring regions. Should the esophagus be accidentally wounded, immediate exact apposition and suture of the wound edges is indicated. After all goiter operations, drain for about forty-eight hours, thereby preventing the symptoms and sequelae due to retained thyroid secretion and extravasated blood. The treatment of postoperative infections occurring in this region is that of infections in general.

Postoperative Pneumonia: Owing to its unfavorable prognosis, it always gives the clinician the greatest concern. The pain in the wound hinders expectoration and lung aëration. The pneumonia may be endemic or epidemic in nature, may be postanesthetic, may follow the aspiration of mucus, blood or stomach contents, may follow exposure to cold during or after operation, may be due to infective emboli, etc., but, most often, almost always, is primarily due to an injury of the recurrent laryngeal nerve or nerves. In the etiology of pulmonary complications, injury of the recurrent laryngeal nerve or nerves is the paramount factor. In old individuals, this condition is frequently hypostatic in type and fatal in outcome. The abandonment of prolonged anesthesia, the avoidance of unnecessary exposure, denudation and rotation of the trachea and especially care to not injure the recurrent laryngeal nerves, have practically eliminated postoperative pneumonia as a danger in goiter operations. If by accident the trachea be opened, guard against the aspiration of blood. Should the latter occur, lung abscess or deglutition pneumonia may follow. The treatment of postoperative pneumonia is, as yet, purely symptomatic.

Disturbed Deglutition: In dislocating large goiters, the nerves supplying the pharyngeal muscles may be traumatized. Dysphagia of several days duration always follows goiter operations; it is usually manifested by pain on swallowing. Sometimes after operation, patient chokes when trying to swallow fluids. The liquid flows back into the nose or drops into the larynx and trachea. Combat this by turning patient on his face with his head over the edge of the bed; place the glass on the floor or on a low stand and let him drink through a tube uphill. All nourishment will have to be given in this manner until normal control of the pharynx is regained.

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TREATMENT OF PERTUSSIS BY INTRAMUSCULAR INJECTIONS OF ETHER.*

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NEW ORLEANS.

Those among us, who have the care and treatment of children as our daily work, will appreciate the fact that anything which will help us to aid children affected with whooping cough, with its many serious complications, is worth a fair trial. The treatments for this condition have been many, the results anything but gratifying. The death rate has remained the same, and the results have not markedly improved. I believe that it is the opinion of most clinicians that in spite of the toxic effect of the invading organism, that the complications and sequelae of the disease are due to the paroxysm, with its strain on the vascular system; and the disturbance of nutrition. Therefore, anything that will ameliorate or lessen the number and force of the paroxysms will be of distinct value in the treatment of the disease.

My attention was first attracted to the use of ether by an abstract in the A. M. A. Jour. for Oct. 28, 1922, by G. Genoese from the Jour. Policlinico, Rome, who cited 50 *additional* cases which he had treated with intramuscular injections of ether, with such good results. I have since had the opportunity of reading a translation of his two original articles in which he gives the results in a total of 64 cases, and these were so encouraging that I began the use of ether for whooping cough in the early part of this spring. My results were better than any I have had with any other form of treatment. He stated that the treatment could be given to the youngest patient and improve the condition, even when it fails to cure, and that the younger the patient, the better and quicker the results. He gave a total of from 2 to 12 cc. in different cases, injecting 0.55 cc. on alternate days. The benefits were most pronounced the earlier the treatment was begun.

He states that the first use of ether in whooping cough was by inhalation. The ether being sprinkled on a handkerchief and inhaled by the patient during a paroxysm; in this manner a considerable diminution in the manner of attacks and a much lessened intensity of the attacks were obtained. This method was not satisfactory, due to the difficulty in using it. Cadet of Gassicourt was the first to use it in this manner. The intramuscular method was first used by Adrian in 1914 and confirmed by Weil, Donfourt, Renard, De Herripon, Dalche and Variot. There has been no work done on this subject by English writers that I can find.

During the latter part of this winter and during this spring, there has been an epidemic of whooping cough of fairly large proportions, prevailing in the city. My series comprises 107 cases treated with ether, in clinic and private practice. My results fully confirm all that Genoese claims for it; in fact, in some instances they were startling. One instance, a physician's family, where there were four children varying in age from 3 months to four years, they were in the third week of the infection and coughing almost constantly. They were unable to sleep or retain any nourishment. The first injection was given to all of them in the morning, and the two eldest children promptly took a nap of about 6 hours. The improvement was steadily for the better from that time on; the number of injections required fully to control them were four, the dose varied from 0. 5 cc. for the youngest to 1.5 cc. for the eldest, given every other day.

*Read before the Louisiana State Medical Society, New Orleans, April 21-23, 1925.

Among my series, the cases varied in age from 2 months to nine years. The stage of the attack included those beginning with a slight cough with a history of exposure, no temperature, no chest findings to account for the cough, cough gradually increasing in severity, especially at night, cough being paroxysmal in character, and with a high percentage small lymphocyte count; those who were coughing and vomiting, having reached about the second or the beginning of the third week of the disease; those with the whoop fully developed; those in the stage of decline; and eight in whom the pneumonia had already developed. The ether treatment was begun in all cases promptly, including those with the pneumonia.

Among the cases with pneumonia two died. The other six made uneventful recoveries, there being no empyema or abscess of the lung, which is often found in cases of whooping cough with pneumonia. One child, not among the pneumonias, died in convulsions which lasted about 36 hours, twelve days after the last injection of ether had been given. I was not able to observe this child in the final outcome.

There were fifteen cases of the series complicated by diarrhea, which responded very promptly to dietetic treatment alone.

Fifty per cent of the cases of the series showed marked improvement after the second injection or within 72 hours. Twenty per cent, after the third injection, or in four or five days. Twenty per cent required four injections to control the paroxysms, and ten per cent required from five to seven injections, the largest number of injections made, and a space of twelve days entirely to relieve the condition. Those cases requiring the larger number of injections gave evidence of being mixed infections, probably with the influenza bacillus. Taking the series as a whole, they all improved before the sixth day of treatment.

The younger the patient, and the earlier the treatment is started, the better the results. In fact, in some of those that were treated at the beginning the parents doubted that the child had a true case of whooping cough.

Only one case developed pneumonia after the treatment was started, this was a very weak infant, very much under weight and had four hernias in the left lower quadrant of the abdominal wall. This patient is one of the two who died with the pneumonia. No form of treatment was of any value in this case.

I used the buttocks as the site of injection, being always careful to place it deep into the muscle. If the injection happens to be made subcutaneous it is followed by a slough that is very painful and annoying to the patient and usually brings about objections from the parents to any further injections. With reasonable care this is easily avoided, this treatment not being much more painful than the vaccine treatment.

The injections were given every 48 hours as suggested by Genoese. The amount injected was varied with the age, weight, severity, and the results obtained by the first injection; the dose being increased if the first showed no results. The amount given at one injection varied from 0.5 cc to 2 cc. The largest doses did not cause any untoward effects that could be noted. Within about a half hour after the injection the odor of ether could be noticed on the breath. A check was kept on the urine and blood to see if there was any pathology that could be attributed to the ether; the findings proved entirely negative; in fact during the whole series there was nothing found that could be called a contra-indication to the use of the drug.

During the latter part of the series in those cases which showed a bronchial cough after the whoop had been controlled, or were inclined to whoop with any

effort to cough, I made use of Chloretone**. It is claimed to be an anti-spasmodic with a low toxicity. It was given in a mixture of Glycerin and simple syrup, the Glycerin being used as a solvent for the chloretone. It was used in nine cases with very good results. It was given in doses of ½ gr. to 2 or 3 grs. depending on the age and weight of the child, sufficiently large doses being used to control the cough without causing drowsiness. The children took it readily, the taste not being unpleasant or nauseating.

Conclusions.

First: Ether is an effective treatment for whooping cough. The results being better than those obtained by any other form of treatment in my experience.

Second: The dose should be varied with the age and weight of the patient, and the severity of the case.

Third: Absence of risk or danger in using this treatment further recommends it. Care, however should be taken to make the injection intramuscular and not subcutaneous.

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*From School of Medicine Tulane University.
**Prepared by Park-Davis & Co.

Dr. H. P. Jones ((New Orleans): During the last year we had 38 cases of whooping cough in the infectious service. These cases of course usually come in in extremis or are very ill and are hard cases. Out of that number two of them died within 36 hours of broncho-pneumonia and the remainder made a most satisfactory progress under the use of ether injections alone given practically as Doctor Pollock has mentioned. So that at the present time that is about all the treatment we are using for whooping cough except to correct other things that may turn up. It certainly is the most satisfactory treatment for these cases that I have ever come in contact with.

Dr. C. J. Bloom (New Orleans): I have refrained from discussing the paper of my good friend and confrere, Doctor Pollock for the reason that I am not yet a convert to his particular plan of treatment. I am delighted, however, to see the good results that he has obtained, but as most of you know I still feel rather satisfied with the plan that I have been using since 1914. I am not going to burden you with statistics at this time, but granting for the sake of argument that the plan used by Doctor Pollock is as efficient as the one we use, that is the vaccine therapy, we cannot prevent whooping cough by the use of ether administration. If we consider the remarkable effects and if we take into consideration the statistics we have to offer, as we have demonstrated in two of our institutions here in New Orleans, in the way of preventing whooping cough; when you consider the 350 cases that we have innoculated in the way of prevention, running back as far as 1914, and only four cases of that number having developed whooping cough, I believe the vaccine therapy should be considered seriously by all of us. At the Seventh Street Protestant Orphan Asylum, at the present time, we have not a single case of whooping cough, nor have we had a case for 14 months, and under ordinary circumstances naturally some of the children would have had whooping cough in 14 months. However, I am delighted with the good results that Doctor Pollock has had with the ether plan of treatment that he has explained to us this morning.

Dr. John Signorelli (New Orleans): I wish to give a report of a limited experience with ether and compare it with experience I have had in a larger number of cases with the injection of various vaccines. When vaccines were first put upon the market we used the preparations both as a prophylactic measure and as a curative measure, and we were convinced that if they were used early you were able to obtain a certain amount of improvement in individual cases. If the case had already progresed to the paroxysmal stage, very little benefit resulted. So far as alleviating the symptoms in cases that had reached the paroxysmal stage, in looking over the literature to find some light on that, I came across one which was reported from some Italian clinic where they had been using injections of sterilized whole cow's milk with the idea of the introduction of a foreign protein into the body. We tried a series of these cases at St. Vincent's Orphan Asylum, but we got no results, although the author quoted a series of cases in which he had obtained good results. My results were so poor that I determined never to use milk again and I struggled along until, on looking through the Italian literature I encountered the same paper that Doctor Pollock mentioned. I am happy to say that I am thoroughly convinced that if you use ether according to the method outlined by Doctor Pollock, in any young case, regardless

of the stage, you will be pleasantly surprised with the results. So far as the older children, after 12, are concerned, I do not believe we get the same results. It would be difficult to explain why, but for some reason we have not been able to observe the same happy results in older children. I believe the injections of ether are the best method of treating whooping cough, regardless of the stage, provided you use it in the younger children under 12 months of age.

SOME OF THE COMMONER DISEASES OF THE CHEST IN EARLY LIFE*

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Chest pathology in early life is assuming more importance as knowledge increases and improved diagnostic methods are more universally used. Further, improved diagnostic methods, particularly the X-ray, have caused considerable change in our views relative to chest pathology, notably in hyperplasia of the thymus, Hodgkin's disease, tuberculosis and the pneumonias.

The presence of an enlarged thymus in the newborn is not infrequent. Blackfan and Little[1] show in a series of cases examined routinely that 48% present an enlargement of the gland. Other writers show an average of approximately 50% enlarged thymus under a routine examination. More exacting methods, however, will show a considerable lowering of this incidence as the thymus shadow is relatively larger on expiration than on inspiration, and on diastole rather than systole. Also, a short target distance increases the size of the picture over a six-foot distance when the rays are parallel. Of the enlarged types, only a small percentage show any symptoms and the hyperplasia would not be detected unless under routine examination by the X-ray and, therefore, present no pathology. In those cases that are pathological, the symptoms are definite: the short, thick neck, respiratory embarassment, stridor, cyanosis on exertion, dull percussion note over the thymus, and, lastly, fluoroscopic and radiographic examinations, determine the diagnosis. Quite a large percentage of cases will show absence of any enlargement at birth and immediately thereafter, but any time after six weeks or two months show the definite shadow of enlarged thymus, wide mediastinum, stridor, dullness on percussion, etc.

These cases should not only have the benefit of a careful tuberculous history, tuberculin test, etc., but tuberculous glands should be definitely ruled out. It is my opinion that the majority of these cases are tuberculous proceses rather than enlarged thymus. Wessler and Jaches[2] are authority for the statement that in infants more than two months old the presence of abnormal masses in the superior mediastinum should be interpreted as tuberculous trachael and bronchial glands rather than an enlarged thymus, and they further state, that these enlarged glands are a more common cause of stridor than enlargement of thymus gland. Also, that actual enlargement of the thymus gland is relatively a rare occurrence, while the incidence of tuberculous tracheo-bronchial glands is very common. In the light of present knowledge a further study of these conditions in their relation to each other would be interesting.

The X-ray has given a new impetus to the study of pulmonary tuberculosis in infancy and early life. In a paper read before this Association several years ago, I reported 55% of all cases examined under five years of age as showing positive diagnosis of tuberculosis. Again quoting Wessler and Jaches [3] "so ubiquitous is this disease, that up to the age of puberty, over 90% of city-dwelling children have passed through such a period of pulmonary infection." Since the percentage of recoveries is so great, it is reasonable to suppose that the body immediately after infection begins to develop an immunity to the disease, and only in those cases in later life when resistance is lowered by some intercurrent

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*Read before Mississippi State Medical Association, Biloxi, May 12-14, 1925.

disease such as influenza, measles, pneumonia, etc., does the active lesion again manifest itself. As the primary lesion usually begins in the parenchyma of the lung and is so unattended by symptoms as to escape detection, it is not until involvement by the tracheal and bronchial glands that the real symptoms of the disease develop. In those cases where the primary infection is massive and virulent, the clinical picture of infantile phthisis may occur, resulting in early death, but in my own experience this is rare, practically all cases assuming the secondary or glandular type and becoming chronic. A not unusual feature in the massive glandular infection, during the sub-acute stage, is that, at irregular intervals, of rupture of a lymph node into the surrounding structure setting up an atypical pneumonia; we are all familiar with that type of patient who can boast of having had from two to five attacks of pneumonia living through them all; a picture of this lung will show where each battle was fought and the lymph node encased in fibrous tissue.

Hodgkin's disease is essentially a lymph adenoma and early involves the lymphatics of the lung hilum. Its diagnosis is not difficult except in the very earliest stages when the pulmonary picture closely simulates glandular tuberculosis, however, the universal glandular involvement, the tendency to fibrous matting of superficial glands, the rapid course, the splenic enlargement, the negative Pirquet test, all serve to make the diagnosis clear.

The pneumonias are mentioned in this paper only to emphasize certain points in diagnosis. It is not difficult to diagnose typical lobar or broncho-pneumonia. However, the X-ray here again plays a prominent part in clearing up obscure and so-called concealed pneumonias. In the diagnosis of lobar pneumonia, the X-ray will anticipate the diagnosis from 24 to 48 hours before the physical signs are sufficiently developed to detect the disease. In cases of broncho-pneumonia, unless the technique is perfect, the X-ray will naturally not be so helpful.

I wish to present some lantern slides showing case reports.

1. Baby Owen. An enlarged thymus gland associated with congenital heart lesion. This baby presented typical symptoms of both diseases, also a negative tuberculosis history and negative Pirquet test. The heart is very much enlarged and thymus enlargement is well defined.

The next few pictures presented will show tuberculosis either as an active process involving the lung tissue or the lymph nodes in the lung hilum. These are the cases that, at birth, would not present any thymus enlargement but later present a picture such as you see here and diagnosed by many as being an enlargement of the thymus gland.

2. Baby Ingram. Age 6 months, well until 6 weeks of age, then chicken-pox and influenza. Present illness: cough, irregular fever and evidence of rickets. The picture shows a wide mediastinum, isolated lymph nodes and enlarged glands at hilum of lung, base inward. This is a diagnostic point in tuberculosis as contrasted with lobar pneumonia. In tuberculosis the inflammatory mass shows base to the center and apex to the surface; in pneumonia, the base is to the surface and apex to the center. This baby had two attacks of apparent rupture of infected glands giving rise to tuberculous pneumonia since she came under my treatment. Von Pirquet test, 3 plus positive.

3. Elaine Oswalt. Age 2 years. Provisional diagnosis rickets. A noteworthy observation in these cases of tuberculous lymph nodes is that undernourishment is a constant condition and rickets is practically always included in the provisional diagnosis. X-ray shows wide mediastinum, heavy tuberculous infection of the right lung, Pirquet test, 3 plus positive. The original report on this baby showed that physical examination of the lung was entirely negative.

4. Bill Bouie. Twenty months of age. Shows wide mediastinum, enlarged bronchial and tracheal glands. Von Pirquet test, 3 plus negative.

5. Baby Cannon. Age 2 years, 7 months. Has had convulsions practically all of his life. Complete muscular paralysis of practically entire body up to 2 years of age. Diagnosis of advanced rickets made originally, with possibly some lesion of the nervous system. Pirquet test, 4 plus positive. Paratracheal and parabronchial thickening down to the 6th rib. A noteworthy observation is the tendency to convulsions in these advanced cases, probably due to low resistance. Many cases of pro-

nounced tuberculosis in infants are accompanied by convulsions, the convulsive level is low.

6. Dorothy Spivey. Age 17 months. Frequent convulsions. Provisional diagnosis enlarged thymus. Shows wide mediastinum, enlarged parabronchial and paratracheal glands.

7. Baby Levine. Four months. Gives history of having been sick practically all of its life. Pirquet test, 4 plus positive. Picture shows wide mediastinum, enlarged and thickened paratracheal and parabronchial glands; isolated lymph nodes on both sides.

8. James Hambrick. Age 6 years. This case is known to a good many doctors in East Mississippi. Had been sick practically all of its life. Came into hospital with acute otitis media but on account of his high temperature was referred to me for examination. Acute inflammatory process due to rupture of a lymph node was present at the time of examination. Notice base to center and apex to the center. Child was operated on for tonsillectomy and put on tuberculosis treatment.

9. Baby Chapman. Age 3 years, 9 months. Chronic asthmatic all its life. X-ray shows large glands. Negative Pirquet test. Cannot explain the negative test except for the chronic asthma. Chronic tuberculous process.

10. Baby Waggoner. Age 10 months. Pirquet test positive. Base and part of lower right side show inflammation. Apex to the surface.

11. Sam Waggoner. Age 29 months. Dizzy spells with rickets. X-ray shows enlarged tracheal and bronchial glands which are tubercular. Pirquet test positive.

12. Pernicia Stroud. Age 10 years. Perfectly normal in every way. When 3 years of age had posterior cervical glandular enlargement with discharge of pus. Present examination shows enlarged posterior cervical gland which was removed and found apparently full of tubercular pus. Picture shows isolated lymph node similar to Hodgkin's disease. Subsequent history justifies this opinion.

13. Baby Johnson. Age 9 months. Had influenza and brought to hospital because of fever and lung involvement. Empyema on the right side. Operated on, pus removed and tube inserted.

14. Baby Alexander. Age 18 months. Case of pneumonia. Involvement of the lung is outside, triangular shaped, base to surface. Diagnosis by X-ray 24 hours before physical signs developed.

15. Evans Richardson. Age 9 years. X-ray shows consolidation of right middle lobe of lung. X-Ray 24 hours before physical signs developed.

16. Horace Henson. Age 5 years. Admitted to hospital with pain in abdomen and slight cold. No symptoms of pulmonary inflammation except fever. Physical signs entirely negative. X-ray of chest showed beginning pneumonia which must have been at least 24 hours old. Next picture taken 3 days after first, shows well-defined inflammatory area, base outward, apex to center. Next picture 2 days later shows general consolidation throughout middle lobe of left lung. Patient had usual crisis clear of fever for 4 days. Readmitted to hospital with high temperature. X-ray showed left side full of fluid. Next picture shows rib resected with tube inserted. Next two pictures are continuations of improvement in the condition.

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DISCUSSION.

Dr. C. A. Sheeley (Gulfport): I enjoyed this paper very much. It seems a peculiar thing that nature put two of the so-called vital organs in the chest, and then went off and left them the least protected. We might say the chest wall is probably the thinnest part of the anatomy, the other organs being better protected; but to compensate for this, a furnace, so to speak, was placed in the chest.

The child has probably the least developed central nervous system, and it is governed very much by its autonomic nervous system, that is, the vegetative system. That system is subject to the changes of environment and so it always seems to me that in the treatment of diseases of the chest in children, and I think this applies to grown people as well, that they should be placed in an environment where they can keep warm without any exercise of their vital functions. That means that their systems will react better if they are placed in an environment which is as nearly as possible the temperature where plant life grows and thrives the best. The nurseryman and florist recognizes this principle and keeps his plant life in a warm temperature, and that same thing applies here. If you keep these little fellows in a good warm room where the temperature is wellguarded, where you know just exactly what it is at all times, they will do better. These people are sick and do not have their normal powers of resistance and cannot be kept warm by clothing. When a child has pneumonia we have gotten away from the idea that he is breathing rapidly because he needs oxygen. He is breathing rapidly because toxines are acting on his nervous system and that affects his respira-

tory centers. The child is not suffering from an accumulation of carbondioxide. The carbondioxide does affect the respiratory centers but it does not necessarily make respiration more rapid, so that rapidity of respiration is no criterion as to the amount of involvement of the chest.

The thing I want to impress on you doctors is—let us have these little fellows in a warm place and keep them well protected. Do not put ice bags on the chest any more than you would call in the ice man to cool off your furnace.

Dr. Joseph E. Green (Richton): This is to me the most interesting paper that has been read today. I cannot add anything to Doctor Womack's paper, except that if we would do more of what he is doing there would be fewer "Baby Gone to Rest" tombstones over this country. That thing is thorough examination of the patient. It is true that many of us in the smaller towns have not the advantages of the doctor who is in the larger town in the way of microscopes and X-Ray, etc., but if we could examine our patients thoroughly, many a poor baby that has an earache would not be given a dose of castor oil and paragoric. I would urge that we take more time making our examinations and be more interested in getting the baby well than we are in getting the dollars into our pockets.

ACIDOSIS IN INFANCY*

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This paper is written not with the idea of presenting anything new, but only to emphasize this subject more fully. The term "acidosis," so often used by the physician to imply a distinct and definite disease, is erroneous—the very word "acidosis" fills the layman's breast with fear.

Acidosis is a process which results in the depletion of the fixed alkali of the body. Normally in the metabolic process considerable amount of acid is produced, such as carbonic, phosphoric, sulphuric, as well as certain organic acids. Under normal conditions, the body is able to eliminate these acids or to neutralize them with ammonia so there is no depletion of the reserve of the fixed alkali in the blood and tissues. In any disease which interferes with this normal metabolism and allows the alkali reserve to be drawn upon, the condition "acidosis" may be said to be present.

Causes: Acidosis may be produced in many ways.

1. Increased acid production as occurs in diabetes (this type we are not discussing).

2. Acute starvation as when the fats break down and give off acetone, diacetic acid and betaoxybutyric acid. Under this heading are included infants that vomit from whatever cause; for example, otitis media, the infant vomits all formulas for 12 or 24 hours with a resultant starvation acidosis.

3. Fever from any cause. We have an increased metabolism and if the carbohydrates are not in sufficient proportion to oxidize the fat acidosis results.

4. Watery diarrheas. The kidneys fail to excrete acid phosphate due to the fact that so much fluid has been lost from the body by other channels. The blood volume in these infants is markedly decreased. The volume flow of the blood is decreased because of the reduction in blood volume and this in turn depends upon the concentration of the blood through loss of fluid.

Symptoms and Signs: Extreme restlessness or drowsiness; stary, sunken eyes, red lips, sweet odor to breath, anxious expression, temperature, subnormal or elevated. The most distinctive clinical evidence of acidosis is the characteristic air hunger. The breathing is deep, the increase in rate is less marked, the respirations are pauseless, and individual respirations may vary in depth, the most striking feature is the amplitude of the respirations and the distinct effort with which they are accomplished. There is no cyanosis.

Laboratory Diagnosis: (1) The determination of the carbon dioxide tension in the alveolar air. We use Marriott's method. The alveolar air is collected by having the patients rebreath air from a rubber bag. The sample of air thus obtained is analyzed by bubbling it through a standard bicarbonate solution containing

*Read before the Louisiana State Medical Society, New Orleans, April 21-23, 1925.

an indicator and comparisng the color with that of the standard tubes. In normal infants at rest, the carbondioxide tension in the alveolar air varies from 35 to 40 mm., tensions between 25 and 30 mm., are indicative of a mild degree of acidosis. When the tension is as low as 13 the patient may be considered in a critical condition.

(2) The determination of the bicarbonate reserve of the plasma by the method of Van Slyke.

(3) Alkali tolerance test.

(4) Acetone bodies in the urine. Acetonuria is exceedingly common in sick infants. It is almost regularly present in all febrile diseases. In many instances, although sufficient acetone bodies are present to give a qualitative test in the urine, the amounts are insufficient to lead to any detectable reduction in the alkali reserve of the body. From acetonuria alone the diagnosis of acidosis should never be made, though when the amount in the urine is very large, it should inspire a careful examination for additional evidence of acidosis. Severe and fatal acidosis frequently occurs when there is no overproduction of acetone bodies and when they cannot be detected in the urine.

Treatment: A thorough physical examination of the infant for a focus of infection. An otitis media if not discovered will often cause vomiting and later a severe diarrhea due to absorption of pus. To attempt to treat the diarrhea and acidosis without first doing a paracentesis would be useless. Occasionally the physical examination will be entirely negative for a focus of infection. Here we treat the acidosis and later go into the history. Often due to improper handling, such as playing with the infant from daylight to dark, the babies threshhold has been so lowered as to bring about an increased irritability. Careful regulation of habits will prevent a recurrence from the above cause. Skin tests for sensitiveness to foreign proteins—if any are found eliminate from the dietary and a recurrence is prevented. The mild cases will respond to milk of magnesia, large amount in broken doses, soda bicarbonate by mouth, sugar and soda enemas, weak condensed milk formulae, orange juice, stick candy, and plenty of water. The fluid intake must be *at least* 3 oz. per pound body weight for the 24 hours. In the severe cases, if vomiting is present, gastric lavage with 5% soda bicarbonate solution, wait 15 minutes, then start with small, frequent feedings of weak condensed milk or orange juice. Do not attempt to put formulae in stomach through tube after lavage, for if you do it will most assuredly be vomited. If you start with 1 oz. of formula every half hour and the infant vomits, go to ½ oz. every 15 minutes; if vomiting persists, 1 teaspoonful every 5 minutes. As the baby gradually holds formula, increase quantity and lengthen the interval of time between feedings. These infants must be fed day and night. Atropin sulphate, 1-500 of a grain, by needle every 4 hours, often helps to control the vomiting. Drugs by mouth are here of secondary importance. Food and fluids come first. To an infant with many watery mucous stools, do not use calomel, milk of magnesia or cascara in an attempt to further cleanse the intestinal tract. A very small dose of castor oil will soothe the already inflamed bowel and exert a constipating effect. For example, where a teaspoonful of castor oil will be a dose for an infant as a purgative, give only 10 drops. The majority of the severe cases of acidosis in infancy are also dehydrated. To these, in addition to carrying out the above procedure, an intraperitoneal injection of normal saline or normal saline by hypodermoclysis, or both. About 30 minutes later, 10% glucose intravenously is given very slowly; 10 c.c. of the glucose solution per pound body weight. This procedure may be repeated every 8 hours if necessary. The results

with this method of treatment are nothing short of miraculous. The mistake often made is giving a hypertonic glucose intravenously to these dehydrated patients with acidosis without having first given the normal salt solution. The patient, as a result, is further dehydrated. As pointed out by Schloss, it is very important to give the isotonic saline solution into the tissues first and the hypertonic solution of glucose into the circulation shortly afterward. Otherwise, the hypertonic solution will draw the fluid from the tissues and cause further dehydration.

DISCUSSION.

Dr. C. J. Bloom (New Orleans): If we consider the fever which is so often present in the newly born, and if we try to limit this loss of weight and the apparent starvation process which is evidenced during the first five days of the infant's life, the so-called acidosis or starvation fever will be obviated.

In regard to the frequent purgation so often instituted in the treatment of these diarrheas, I think it is the most frequent mistake made. Give an initial purgative, and if you desire later on, give a small dose of castor oil, or a few drops of paragoric. You cannot expect yellow movements after frequent purgatives have been given.

As to water, we never give water while children are vomiting. I believe in giving three ounces of water for each pound of weight in 24 hours, but as long as children are vomiting, give some other liquid of choice, such as 5 per cent. sugar, or 2 per cent. bicarbonate of soda, or orange juice, weak tea or other liquids.

Do not attempt to treat the bowel condition primarily, for if you do this by giving purgatives, you will simply add insult to injury. Treat the cause and you will get the effect, and what is true in regard to the treatment of the bowel condition is more true in regard to the treatment of the temperature. If you have fever in these cases and if it goes beyond the initial rise and you attempt to use antipyretics, you will lose the child in most cases. But if you attempt to give fluids by the mouth to neutralize this acetone it will be only a question of a short time until the fever subsides.

In addition to giving sugar and carbohydrates as the main diet by mouth in those cases where you have diarrhea that stimilates colitis, you will find giving irrigation of either 5 per cent. glucose, or dextrose or lactose, alternating with 2 per cent. bicarbonate solution three times a day; the amount of acetone will be reduced in the urine and therefore the life of the child will be saved.

Dr. Emmett L. Irwin (New Orleans): No matter with what branch of medicine one allies himself, sooner or later he is confronted with the problem of acidosis complicating some of the diseases which he may be called upon to treat. While the true nature of acidosis is even now problematical, it is known that an insufficient utilization of carbohydrates to produce complete oxidation of fats will result in acidosis. An altered carbohydrate metabolism, whether due to organic disease, lack of intake or faulty assimilation, is essential to the production of a state of acidosis. The underlying factor then in its treatment should be, "utilization of sufficient carbohydrates completely to oxidize the necessary fat." There is no condition or complication which is more striking or more formidable to the physician than a severe acidosis. The surgeon finds it complicating a number of his cases, both pre-operative and post-operative. Chief among these are the acute surgical diseases—appendicitis, etc.

One can look back to the time when acidosis was lightly considered and these individuals suffering from severe acidosis complicating the acute surgical diseases were immediately operated upon and promptly died. Fortunately, we are able to offset this condition and prepare them rather rapidly for the operation. The acidosis eliminated, chance for recovery is increased and many of these are now saved.

For some time glucose has been used in combating acidosis, though the results have been varied due to lack of assimilation, but when the glucose is supplemented with insulin, the former is certainly utilized and the state of acidosis disappears.

It is very striking and almost miraculous to see the way these individuals will respond to the administration of glucose when supplemented with insulin, and I think the fundamental in the treatment, "carbohydrate utilization," is accomplished. Sometimes these cases are so very ill they vomit everything taken by mouth, necessitating glucose administration by skin, rectum, or intravenously. The latter is by far the most efficacious, and response is immediate.

The results obtained at Charity Hospital are beyond description. One must see the cases to fully appreciate them. For the past year, sodium bicarbonate therapy has been abandoned and the

more efficacious glucose insulin therapy employed.

The acetone breath will appear before acetone can be found in the urine and it will remain on the breath even after it has disappeared from the urine. This simple and practical test may be employed rather than going to the more elaborate and complicate methods of determination.

Usually one or two infusions of glucose supplementing each two grams with one unit of insulin will clear up a case of acidosis, but may be repeated as often as necessary.

Dr. Farrar Patton (New Orleans): I wish to express the pleasure it has given me to hear Doctor de la Houssaye's paper, which I regard as one of the most practical I have yet heard, and congratulate him, as one of the younger men of the profession, on his moral courage in trying to discourage the promiscuous diagnosis of acidosis in cases where a specific diagnosis should be made. As Registrar of the Charity Hospital I have particularly discouraged this among the Internes, believing that it is always possible to locate the underlying condition. Let us find out what the actual condition is and call it that.

Dr. Roy E. de la Houssaye (closing): I am very glad Dr. Irwin mentioned insulin. I deliberately refrained from discussing it in my paper because, until more work has been done, I think it is dangerous. We know that insulin is eliminated in the urine. Most cases of acidosis in infancy are also dehydrated with a consequent diminished urinary output. Again, if you use insulin it should be controlled with blood sugar determinations and in these infants, if you take 5 to 10 c.c. of blood, it is a great loss. Again, the pancreas in infants is very rarely diseased so the ability to metabolize carbohydrates is not interfered with. The results with the method I have given you are so miraculous that I can see no reason for taking a chance with insulin.

ABDOMINAL SURGERY UNDER LOCAL ANESTHESIA.

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The possibilities of major surgery under local anesthesia within the abdominal cavity in the present state of our knowledge on the subject, although limited, comprise a long list of the commonly performed surgical procedures.

Certain general rules should be observed in selecting cases for this form of anesthesia. Very stout, rotund individuals with tense abdominal walls should be avoided. Operations in the presence of acute inflammation should rarely ever be attempted. Highly nervous subjects and those hard to control should also be avoided.

The ideal patients for this class of surgery are those of a placid, tranquil temperament, not too stout, and with relaxed abdominal walls.

The "abdominal brain," the sympathetic nervous system and its numerous plexuses, have no pain sense but receive fibres from the cerebro-spinal system through the rami-communicantes through which all painful sensations are transmitted. These communicating branches are given off from the anterior division of each of the spinal nerves as they emerge from the intervertebral foramina and running forward join the sympathetic chain as it courses downward along each side of the vertebral column. It is probable that the large nerve ganglia in the upper abdominal cavity are liberally supplied with sensory nerves which have communications all through the cavity as it is to these points that painful sensations are usually referred.

A knowledge of the source of nerve supply and its distribution is the key to the successful application of local anesthesia to this great storehouse of surgical pathology. We must aim at the source of nerve supply, namely that region alongside of the vertebral column and particularly in the epigastric region for all operations above the pelvis. In the less extensive operations such as appendectomy, all that is needed is to infiltrate the retroperitoneal tissue on the proximal side of the cecum.

For the more commonly performed operations on the gall bladder and stomach the cavity is opened under infiltration high up

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*Read before Mississippi State Medical Association, Biloxi, May 12-14, 1925.

in the midline and the space between the liver and stomach sought for. A finger is then gently passed down to the vertebral column. A long blunt pointed needle is then passed down alongside of the finger and made to penetrate the peritoneum just to one side of the column. Thirty cc. of ½% novocain solution are injected at this point. The opposite side is similarly injected. Care must be exercised not to injure any vessels or other viscera during these manipulations. The solution injected in this manner diffuses in all directions and effectively reaches the entire nerve supply.

These two injections are sufficient for all gall bladder or stomach surgery. When the field of operation extends below the stomach, this organ together with the transverse colon and omentum are retracted upward and the space just below the transverse mesocolon sought for and two additional injections made in a similar manner. These four injections when properly made are sufficient to anesthetize the entire abdominal cavity above the pelvis.

Within the pelvis we have a somewhat different nerve arrangement. The lumbo-sacral cord passes down on each side of the vertebral column to form a plexus with a large number of small nerves which pass out of the anterior sacral foramina.

To anesthetize the pelvic cavity the needle is entered high up along the course of the lumbo-sacral cord and about 30 to 40 cc. of solution injected just beneath the peritoneum on each side, this solution diffuses downward infiltrating the entire sacral plexus.

As a rule no further anesthesia is needed here although the small intestines may at times give trouble by coming into the field. This can usually be satisfactorily controlled by packing off, which is favored by the Trendelenburg position. Where trouble is encountered from this source a fair degree of anesthesia of the intestinal coil can be obtained by an injection of 30 to 40 cc. of solution made as high up over the anterior portion of the vertebral column as can be conveniently reached. With the patient in the Trendelenburg position the solution flows upward along the column to the root of the mesentery.

Where only a limited amount of manipulation is needed and the parts not bound down as in the case of an ovarian cyst, all that is needed is to surround the operative area in the broad ligament with a fairly liberal injection but if the parts are bound down and must be mobilized it will be necessary to block the entire pelvis as described above.

The utilization of the various methods of para vertebral anesthesia for intra-abdominal surgery has not proved very satisfactory in my hands. The time consumed, the manipulation of the patient, the large number of injections necessary, each of which must be accurately made, and quantity of solution needed are the objectionable features. If any one of the injections fail to reach the nerve supply a failure results which is not known until the abdomen is entered and too late to repeat.

One half per cent novocain solution with 3 to 4 drops of adrenalin solution 1 to 1,000 to each ounce is amply sufficient though some operators prefer to use a 1% solution.

A preoperative hypodermic of morphine gr. ¼ and scopolamine gr. 1-150 is quite important and had best be given one hour before operation. If a slight drowsiness is not induced it can be repeated in half the quantity just before the patient goes on the table.

In cases complicated with extensive adhesions making it impossible to carry out the above technic it must then be modified to suit the conditions by infiltrating and dissecting through the adherent areas until the posterior abdominal wall is

reached. In extremely bad cases the entire operation may have to be performed by dissecting through the adherent mass such as is often seen in old chronic gall bladders. In cases where this condition is suspected a general anesthetic is to be preferred unless absolutely contra-indicated.

TWO YEARS UNDER THE SHEPPARD-TOWNER ACT*

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When the Children's Bureau was created in 1912, infant mortality was one of the subjects it was directed to investigate. The initial study, made in an industrial town in 1913 was repeated, at the special direction of Congress, in nine other industrial towns and cities, including Baltimore, Maryland, and Gary, Indiana. Studies were also made of the care available to mothers and infants in typical rural communities of twelve States of the South, middle West, and West.

All these studies indicated the coincidence of a high infant mortality rate with low earnings, poor housing, and the employment of the mother outside the home. They also showed that there is great variation in the infant mortality rates, not only in different parts of the United States, but in different parts of the same State, the same city or town. These differences were found to be caused by different population elements, widely varying social and economic conditions, differences in appreciation of prenatal and infant care, and in the facilities available for such care.

Evidence of the methods used in successful efforts to reduce infant mortality was also assembled. It was demonstrated that where mothers had received instruction on the proper care of children, the value of breast feeding, and the importance of consulting a physician upon the first indication of disease, there was a substantial decrease in deaths, especially in those from gastro-intestinal and respiratory causes. Only slight progress had been made in reducing the deaths in early infancy, including deaths caused by premature birth, congenital debility and birth injury. Consideration of the causes of infant mortality inevitably leads, therefore, to the question of prenatal, lying-in and postnatal care of the mother.

In the annual report of the Children's Bureau for 1917, Miss Julia Lathrop, the Chief of the Bureau, called attention to the method of co-operation between national and local government adopted by Great Britain in the so-called grants-in-aid for maternity and infant welfare work, and suggested that the United States should use the well-established principle of Federal aid as a basis of national and state co-operation in reducing the unnecessarily high death rate among mothers and babies in this country. The best known previously enacted laws of this general type were: The Morrill Act of 1862, providing for land-grant colleges; the Hatch Act of 1887, establishing agricultural experiment stations; the Smith-Lever Act of 1914, creating the agricultural extension service; the good-roads act of 1916 (extended in 1919, 1921, and 1922); and the vocational education act of 1917.

The Sheppard-Towner Act for the promotion of the welfare of maternity and infancy, which became a law November 23, 1921, may be briefly summarized as follows:

1. Appropriation. It authorizes an appropriation of $1,240,000 for a five-year period, of which not to exceed $50,000 may be expended by the Children's Bureau for administrative purposes and for the investigation of maternal and infant mortality, the balance to be divided among the States accepting the act as follows: $5,000 unmatched to each State, and an addi-

*Read before the Mississippi State Medical Association, Biloxi, May 12-14, 1925.

tional $5,000 to each State if matched, the balance to be allotted among the several States on the basis of population, and granted if matched.

2. Administration. National administration of the act is lodged with the Children's Bureau of the Department of Labor; local administration in the States rests upon the child-hygiene or child-welfare division of the State agency of health, or where such a division does not exist, upon the agency designated by the State.

3. Plan of Work. The act intends that the plan of work shall originate in the State and be carried out by the State. A Federal Board of Maternity and Infant Hygiene, composed of the Chief of the Children's Bureau, the Surgeon General of the United States Public Health Service, and the United States Commissioner of Education, may approve or disapprove State plans, but the act provides that the plans must be approved by the Federal board if "reasonably appropriate and adequate to carry out its purposes."

At the present time 43 States and Hawaii are co-operating under the Act. Porto Rico and Alaska have requested that they be included, but Congress has not as yet acted upon their petition. The States not co-operating are Maine, Massacusetts, Connecticut, Kansas and Illinois.

In all but two States the administration is in the State Agency of Health. These are Iowa, where the work is carried on under the State University Extension Department, and Colorado, where it is under the State Department of Education.

Each State has its own local problems to face and the State plans necessarily cover a diversity of conditions. But the main objective is the same, to protect child life and health. Certain basic principles underlie all the State activities, such as (1) better infant care through the teaching of mothers; (2) better care for mothers through education as to the need and value of skilled supervision during pregnancy, childbirth and the lying-in period; and (3) more widespread medical and nursing facilities so that adequate maternity and infancy supervision will be available to all who need them.

Since the life of the child begins in utero any work designated to protect the life and health of children must include the period of gestation. Therefore all the States are including in their child-welfare programs measures designed to insure adequate care for the pregnant woman, who often fails to appreciate the importance of medical supervision during pregnancy and seldom understands how necessary it is to have skilled attention at the time of labor. The nurses find, however, that if their advice to mothers to seek prenatal care is based upon the needs of the baby, the mothers are much more willing to listen, for almost every woman can be made to see the desirability of medical attention for her children.

For obvious reasons it is more difficult to initiate prenatal than preschool work. New York and Michigan each employ an obstetrician whose entire time is devoted to the holding of prenatal conferences. This is a very costly undertaking and most of the States feel that their budgets are not sufficiently elastic to allow for this character of work.

Minnesota has an outstanding prenatal program. During the past year two of the leading obstetricians of Minneapolis, who are members of the teaching force of the University of Minnesota Medical College, have given some time to work under the State Bureau. They travel into the rural districts and spend a day conducting prenatal conferences. Prenatal examinations are given to determine the general physical condition of the patient and include examination of the teeth, heart, lungs, blood pressure, pelvic measurements, presentation and position of fetus, auscultation of fetal heart, examination of urine,

questioning as to elimination and always include advice on the importance of having adequate prenatal care. The patient is advised to put herself under the observation of the family physician in order to receive the necessary attention both before the baby is born and at the time of delivery.

As the majority of the doctors in Minnesota are graduates of the State University Medical School, the two obstetricians who work with the Bureau of Child Hygiene are well known to most of the practicing physicians. Hence the local physicians not only co-operate satisfactorily, but they often bring cases for consultation. Before the day is over the obstetricians hold public meetings to which all women in the neighborhood are invited. General talks covering the hygiene of pregnancy are given here.

Because it is difficult to reach women who live in isolated regions many of the States conduct a correspondence course on the hygiene of pregnancy, which consists of a series of lessons with a number of questions which the student is to answer and return for correction. Other states have used the so-called prenatal letters. These consist of a series of letters which are distributed monthly to expectant mothers. They deal entirely with the subject of pregnancy, telling what to expect as pregnancy progresses; pointing out danger signals; and stressing the importance of consulting a physician. Thousands of these letters are sent out every year in response to requests from physicians, public-health nurses and others.

Considerable attention is given in some of the States to the making of obstetrical packages. Under the direction of nurses, local clubs or other groups of women prepare well wrapped packages containing articles that will be needed at the time of delivery. These packages are sterilized and placed with the local druggist, the county nurse, or some place easily accessible to all in the neighborhood. In this way surgically clean dressings are furnished for the use of the doctor, and lay people are given a practical demonstration of the imperative need of asepsis at even the most normal delivery.

The program of some States includes mothers' classes. These classes usually consist of a series of four or five lessons covering the time from the beginning of pregnancy until delivery. They furthermore give instruction in the care of the newly born baby and the health of the preschool child.

Little Mothers' Classes are similarly conducted in many States. In these classes school girls are taught the rudiments of child care and the fundamentals of the hygiene of infancy.

Much educational literature is distributed. Some of the State Bureaus of Child Hygiene prepare their own bulletins and phamphlets and the Childrens' Bureau bulletins—Prenatal Care, Infant Care, and Child Care—are also widely used.

Much attention is given to the encouragement of breast feedind and mothers are instructed as to diets that contain the best milk forming foods, and are urged to eat such food, both before the baby is born and during the lactation period. Instruction in milk expression is also given. The Bureau of Child Hygiene of New York State has established in Nassau County a breast feeding demonstration where over 2,800 cases have been observed, and where the demonstration is to continue until 1,000 cases have been followed for nine months. This demonstration has served a further purpose in that it has furnished a teaching center in the technique and promotion of breast feeding for all the nurses on the state staff. Several of the nurses have become so interested that they are planning to begin definite demonstrations in their own counties, and three of these have already been started.

That better obstetrical care may be given, the States having a midwife problem

have instituted measures for midwife training. Many States have made surveys, and are instituting methods of instruction. What the South is doing, you all know. Mississippi was one of the first to institute classes for midwives. Today, every Southern State has some machinery for the instruction and supervision of colored midwives.

Each State aims to make facilities for a complete physical examination available to every child before his school life begins. If a child enters school relieved of the handicaps of poor vision, deafness, bad teeth, enlarged tonsils or adenoids, faulty posture, nutritional disturbances or improperly functioning internal organs, we, as physicians, can easily realize how much better chance that child will have.

Often the apparently well child may have some slight physical defect which the parent does not appreciate. If treated in the beginning, this may perhaps require but a minor operation or curtailed treatment; but, if neglected, it might develop into a really serious condition.

To give these children a chance, all the States' activities embrace the holding of children's health conferences. Pioneer work has consisted, in most cases, of holding such conferences in outlying districts, thus endeavoring to make these examinations accessible to every child in the State. So far only two States, Idaho and Iowa, have held conferences in every county, but encouraging progress toward this goal has been made in all States.

In California last year a "pre-school drive" was made during April and May in 20 counties in the endeavor to have all children between five and seven years of age given a complete physical examination so that all defects might receive attention before the fall when they would enter school. This was done only in the counties where co-operation from the medical and dental associations could be relied upon. In some cases the local doctors examined the children; in others the county medical association requested that the State Bureau supply a skilled pediatrician. The results of this campaign were most gratifying and its success has been demonstrated by the fact that this year more counties have requested the State Child Hygiene Bureau to aid in a pre-school health campaign.

Very frequently these conferences are the beginning of permanent health centers, which are held at regular intervals, usually in the office of the county nurse. Where there is a full-time county health officer he attends and the nurse assists him as he examines the children and advises mothers. Where a full-time health officer is not available the local doctors make some arrangement among themselves so that the responsibility for conducting the conferences is divided among them. At these children's health conferences the mothers often are instructed in the hygiene of pregnancy; they are advised to put themselves under the observation of a physician early in pregnancy; and literature is distributed. Not only are children examined and corrective work indicated, but the importance of keeping well and preventing illness is put before the public in such a way that incalculable educational work is accomplished.

In several instances dental advice is given at the children's health conferences, dentists often being present to examine the children's teeth and to give directions to mothers.

The administration of toxin-antitoxin to children of preschool age has been included in the activities of several of the States. Through the child health centers in Pennsylvania the State Board of Health supplied physicians with toxin-antitoxin, thus trying to reach all children over six years of age. To date 135,598 preschool children have been immunized. The Schick testing is done six months later.

Nutrition classes form a part of several of the State programs. In these classes the undernourished and overnourished

children have proper diets prescribed for them and are kept under observation until they show satisfactory improvement. The nutrition workers also instruct the mothers in the preparation of food and give them advice as to proper dietaries.

A study of the reports of the state bureaus for the United States' fiscal year 1924 shows that 15,547 Children's Health Conferences were held at which 303,546 children were examined. This indicates rural work almost entirely as very little Federal money is spent in cities. Knowing the population of our country, we can easily appreciate how very much still remains to be done.

The burden of the responsibility for the furtherance of this work rests upon the medical profession and it is your duty in Mississippi to help individually and collectively, in every way possible.

You can all know the nurse in your county and familiarize yourself with her work. You can easily ascertain what she is teaching and, if you disapprove, give her such instruction as you find necessary. The county nurse can be used to give instruction to patients, and can keep these patients under her observation, referring them to the physician only when his personal attention is needed. In that way the burden of the busy practitioner can be lightened while the patient is still safeguarded. Not only will you find the nurse helpful during the prenatal period, but she can also aid you by visiting the patient during the early weeks of the baby's life, that period of adjustment for the mother where she needs so much teaching concerning the care of the small baby. The nurse can also persuade the mother to return to the physician at the end of six weeks for the internal examination which should then be made. The county nurse has had specific training in all branches of public-health nursing and stands ready to supplement you in your services to your State.

We are confronted by tremendous handicaps of tradition, and by the burdens of superstitution prevalent among a large proportion of the general public. But all of this can be overcome, and is being overcome, by the steadily increasing co-operation of the family physician, who realizes more and more his responsibility and upon whom rests the ultimate success of all preventive medicine.

DISCUSSION.

Dr. W. D. Beacham (Hattiesburg): This is certainly a very interesting paper and only those of us who have given much thought to this subject appreciate it. While we admire the woman who has succeeded in a commercial and a professional and political world, all honor to the woman who has propagated her race and has been called "Mother." She is certainly entitled to every consideration and every aid to render child birth as easy as possible, and for the protection and care of her offspring.

As director and full time County Health Officer, I will say to you that in Forest County we are mailing these circular letters to quite a few mothers. We are having mothers' meetings and instructing them how to care for themselves, and as you know, it is a problem of the midwife, and caring for expectant mothers is still a problem in our state. Quite a few of our doctors say that we ought not to mention the word "midwife," that we ought not to give recognition to them to that extent. Others say we should teach them since we must use them. As an official, I say to the medical profession that I am not exercising mid-wife control; I am not teaching them to be doctors, but I am telling them what they must not do, and that if they do do things I will see that they are confined in jail. I am telling these mid-wives that when they are engaged to wait on a woman, they shall tell her they will be glad to come, but that eventually she must have a doctor, and make them select the physician. Then I insist on the midwives counselling with the obstetrician in order that the best care may be taken of the expectant mother. In our laboratory we gladly analyze the urine. We thought for a while we would open the door, say once a month, for the examination of these expectant mothers and to educate the people to employ skilled physicians, but the medical fraternity said, "Hold on, don't get in too big a hurry." Our position is that the public health will never get anywhere unless we have the co-operation of the medical profession, and I will say that the medical pro-

fession of Forest County has given all the help the Department asks them for to assist in this great work, and render this service without cost. I hope the time will soon come when the doctors will give these women a thorough examination, or will permit the all time health department to do it, and refer them to the medical profession for treatment when they need it. Seventy-five per cent of puerperal eclampsia are in cases that you are called upon to treat where you have not seen the patient previously, and if these patients had been cared for properly beforehand, this condition could have been prevented in most cases. Since the doctors are going to the larger centers and the rural districts are without competent physicians to do the necesary operations to preserve the health and life of these women, it is important that they have an examination before they arrive at this all-important hour. It means so much to have a blood test, especially where syphilis is suspected, in order that they may have proper medication, and there are many other things too numerous to mention. We are recognizing the importance of a thorough examination of the expectant mother, but as has been said before today, there is too much of the old style practice being used—look at the tongue, count the pulse, and give a purgative and quinine. We may as well be frank, put the cards on the table face up, and call a spade a spade. The time is coming when the boys who come out of school will be better doctors because they are willing to work, and the man today who is not willing to work is not worthy the title "M. D."

As to the babies, last summer at Saluda, North Carolina, Doctor Royster read a paper on cranial hemorrhages that I thought was worth the whole trip to Saluda. Learn how to take care of these new born babies—too many of them die. If you want to learn something about this work spend a few days at Youro in the obstetrical department and the child welfare department.

Dr. Oscar Dowling (New Orleans): It is no new thing for Louisiana to follow in the footsteps of Mississippi, and the results up to the present time have been very satisfactory. We hope that some time in the future we can establish what we will call emergency stations where expectant mothers may go to be examined and where if necessary they can be confined and taken care of up to a certain period after the coming of the child. We realize that entirely too many babies have died in Louisiana; there are too many miscarriages, a number of which could be prevented if the mothers had proper attention beforehand. We know approximately to what an extent syphilis prevails, and if the expectant mothers who have syphilis were properly treated, many lives might be saved and they might bring children into the world who would be an asset instead of a liability.

An important thing is to look into the living conditions, and beginning at the close of the school year at Tulane this year, six or eight students will be employed who will visit the towns of the state and some of the plantations to make an investigation of the living conditions of the people, following it up on the basis of last year when it was confined to the living conditions of the colored people. This year they will take both colored and white and see what improvements have been made in connection with the living quarters of the negroes.

We must protect the milk supply. Mississippi is equally as far behind as Louisiana in the production of good milk. We want to see this milk supply properly protected for the benefit of the babies as well as of sick people who have to use the milk. You can be wonderfully helpful in this and any assistance you may give will help Louisiana. We want more babies and better babies in Louisiana, with the rich red blood of health, and we know you want the same thing in Mississippi. Where they are colored we want to give them the same chances as the white in order to reduce the death rate as much as possible.

Dr. Florence E. Kraker (closing): There is something I want to tell you. Under the auspices of the Children's Bureau a committee of some of the leading obstetricians of the United States has been meeting for the purpose of formulating standards for prenatal care. These men have been working for several months preparing a plan which is now almost ready for publication. It will be printed and distributed to every physician in the United States. You can use it in your offices and prenatal clinics.

A week ago the committee met for careful final discussion of each item in the standard. In regard to one paragraph which said, "The woman who is to be delivered by a licensed midwife should be examined by a physician six weeks before delivery and again two weeks before delivery," Doctor Adair, of Minneapolis, said, "The woman who is to be delivered by a licensed midwife should have the same prenatal care as that to which every other pregnant woman is entitled." This was agreed to without a dissenting voice.

It is only by control of the midwife by the doctors working with them that we can improve their work and so help the women who are dependent upon them for maternity care.

NEW ORLEANS
Medical and Surgical Journal
Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following named Journal Committee:

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SUBSCRIPTION TERMS: $3.00 per year in advance, postage paid, for the United States; $3.50 per year for all foreign countries belonging to the *Postal Union.*

Material for publication should be received not later than the twentieth of the month preceding publication. Order for reprints must be sent in duplicate when returning galley proof. Authors pay for preparation of cuts and space they occupy.

THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

Communications should be addressed to: New Orleans Medical and Surgical Journal, 1551 Canal Street, New Orleans, La.

"'TIS WELL SAID AGAIN."

The past year has been a good year. The physicians of many sections of Louisiana and Mississippi have shared in the general prosperity.

What the coming year may hold we can none of us forsee; but it is the earnest desire of the JOURNAL that for you it may bring a generous harvest of happiness and good fortune.

The humanitarian attitude and service of the physician is known to all. He gives his time and sacrifices personal convenience to the need of the hour, he gives his skilled service in unstinted measure for the relief of pain. He works freely in the cause of preventive medicine and sanitary science. If the inner consciousness of duty faithfully performed, of good work well done is in any degree a recompense for labor, then the medical profession of these two states should feel happy and satisfied with the results of their efforts.

There is one phase of medical effort which should be stressed—greater activity by the medical societies.

Through the medical society higher standards of knowledge are encouraged insuring better service to the public. It makes us more careful of what we do and what we say. When warm and genuine feelings of fraternity pervade our hearts then do we become incapable of wronging each other, even in the absence of any written code of ethics.

We should strive to secure the membership of every reputable physician possible, and even if he is not in a very strict sense reputable, still if there is no just cause of unprofessional conduct, legally or ethically, against him, he should be invited to join his local society. Our local societies should make it a matter of pride to vie with each other as to which can most nearly absorb into its membership all the doctors within its jurisdiction.

There are very few doctors, who, if properly approached, can not be induced to join the local society. Some stay out for reasons that appear too insignificant for respectful consideration, but those who are members and who have the good of the profession at heart can afford to be generous—can afford to study and adopt such measures as shall induce professional confreres to return or to join.

This is the spirit that wins and is so like that of the Master, that it is twice blessed—it blesses him that gives and him that receives.

Suppose we make a New Year Resolution to get all doctors who are available to join the society and see that all are properly disciplined—such as would naturally grow out of a complete organization,—then we would realize how powerful an organization we constitute.

Again The JOURNAL extends cordial good wishes. May fortune smile upon you and favor you with many blessings. May peace and happiness be yours during 1926.

THE GREEN WAVE.

It is with some trepidation that the Editor assumes to chronicle the prowess of the 1925 Tulane Eleven. So easy is it to allow enthusiasm to carry one away from *terra firma* in such a matter that proper moorage must be furnished an Olive and Blue pen. It is unusual to comment editorially on a foot-ball team in a medical journal. But then, the Green Wave was an unusual aggregation. Gridiron experts the country over place Tulane this year among America's Big Four, the other three conquerors being Dartmouth (East), Michigan (Middle West), and University of Washington (Pacific Coast). Coach Shaughnessy's boys swept everything before them this year except the Missouri warriors, whom they played to a tie. At their hands Louisiana College, Ole Mississippi, Northwestern, Mississippi Aggies, Auburn, Louisiana Tech, Sewanee, Louisiana State and Centenary tasted the dust (or mud) of defeat.

Regarding individual players, it is difficult to pick those most conspicuous when all of the eleven men were stars. Halfback "Peggy" Flournoy is conceded All-American material, having individually registered 129 points—the highest score made in college foot-ball this season. Captain "Les" Lautenschlaeger was the best quarter-back in Dixie and rated by many critics as the fox of the gridiron this season—a distinction worthy of the man. "Irish" Levy completed the trio of outstanding Olive and Blue defenders, he being acclaimed honorable mention as All-American guard by the Associated Press.

Clark D. Shaughnessy, after years of unremitting effort, has given Tulane a team second to none and no praise, sufficiently extravagant, can begin to laud his labors. May his shadow never grow less. Dr. Lucian H. Landry, president of the Alumni Association and surgeon to the team, deserves the thanks of all followers of the Green Wave for the excellent physical shape in which he kept the boys. The doctor is soon forgotten once sickness is passed. It was no wonder therefore that the press, in the furore of victory after victory, should have fogotten to mention Dr. Landry. We forgive them.

In honor of this team the citizens of New Orleans joined the student body and alumni of the University in rasing $300,000 in four days to build for Tulane a stadium commensurate with the dignity to which the Green Wave is entitled. The capacity of the new stadium, which will be completed for next Fall, will be 42,000.

Tulane, our *Alma Mater*, we salute you!

MEDICAL PUBLICITY.

We were pleased to note at the annual election of officers for the year 1926, held recently by the Orleans Parish Medical Society, a measure directing the officers to purchase space in the daily press advertisement columns was voted down. The measure proposed that at intervals the Society print quarter page advertisement in New Orleans papers, the principal part of most of the ads dealing with dissertations on "Why Don't You Pay Your Doctor Bills?" In a locality such as New Orleans, where the profession has done practically nothing to educate the lay public relative to preventive medicine, modern medical advances and the like, it would be the height of poor taste and judgment to run advertisements in the daily papers reeking with commercialism. Unquestionably such expositions of rancor would prove a boomerang to the society who fostered them. That the patient has a responsibility to his physician in offering fair remuneration for services rendered needs no argument to affirm. That this matter, at some future time, might tactfully be alluded to, in concluding a series of articles written for the lay reader, seems not objectionable.

For years certain members of the Orleans Parish Medical Society have made efforts

to interest the officers of the Society to the end that short articles, written in clear language, and dealing with the medical problems of the day, be furnished at intervals to the daily press so that the public might be appraised of the advances being made. The articles to be approved by the Orleans Parish Medical Society and issued under their jurisdiction. The daily papers would cordially welcome such contributions and would print them at no cost whatever. It has been done, and is being done today, throughout the length and breadth of the land. Why can it not be done in New Orleans?

The JOURNAL feels that the lethargical attitude of the physicians in Louisiana relative to this matter should cease. Let us have some action. We sincerely hope that the newly-elected president of the Orleans Parish Medical Society, Dr. Maurice J. Gelpi, and his efficient corps of co-workers will consider this matter among the first of its problems to be solved during 1926 and that ways and means will be evolved at an early date so that the program of educating the public in matters medical shall be retarded no longer.

"NOW IS THE TIME."

We cannot refrain from calling the attention of the medical profession and, especially, of organized medicine, to the fact that the state legislature will again meet next spring. We may be considered a little premature, but we are not. "In time of peace, prepare." Now is the time to reflect and consider what we want to bring up for the good of the people of this state (not so much for ourselves) at the forthcoming gathering of our law-makers at Baton Rouge. It is true that the State Society will meet in Monroe just before the legislature convenes and we should speak through our House of Delegates; our new officers will have been installed and they should be flush with enthusiasm.

Be on the "qui vive," Doctors! We must not sleep on our rights or the needs of the public. A certain cult, like the proverbial bee, is already "on the wing," so to speak, with propaganda; we might as well make up our minds to wake up and stay awake, early and late.

ROCKY MOUNTAIN SPOTTED FEVER.

The United States Public Health Service, one of the duties of which is to investigate diseases of man with the ultimate purpose of devising means for prevention and cure, has recently announced the results of experimentation which lead to the belief that a most unusual vaccine has been produced which may protect human beings against Rocky Mountain spotted fever.

"Rocky Mountain spotted fever, sometimes called tick fever, which occurs principally in certain Northwestern States, has been the subject of investigation and experimentation for a number of years", says Surgeon General Cumming. Little was known of the disease before 1902. It has an exceedingly high fatality rate; in some localities about 7 patients out of every ten die.

It is a fatal disease when contracted in the laboratory. Assistant Surgeon McClintic, an officer of the Public Health Service, contracted Rocky Mountain spotted fever while engaged in experimental studies in Montana and died in line of duty, as did also Laboratory Assistants William E. Gettinger, and George Cowan—all martyrs to Science.

The disease is transmitted by ticks. A peculiar feature of the virus which produces this fever, a feature discovered by Public Health Service investigators, is that it passes through developmental phases in the tick—the intermediate host—whereas it has no such phase in man or animals.

At one period in the life of the tick, the virus of the disease as obtained from the ticks will not, when inoculated, produce the disease in animals. This period corresponds in time with the hibernating

period in the life of the tick, or at least to the period of its life in which the tick takes no food. At another stage of development, corresponding to the feeding time of the tick, the virus is highly infective and virulent.

In 1923 and 1924, the investigators prepared a protective vaccine made by extracting and attenuating the virus from macerated infected ticks during the stage at which the virulence of the virus was highest—a period following the ingestion of animal blood by the tick; and this vaccine was found to protect laboratory animals from the disease. During the present year these experiments were continued and the vaccine was tested on monkeys and man. It was proved that it protects guinea pigs, rabbits and monkeys, and it is now believed to have modified the severity of the disease in the case of a man who contracted it after having been vaccinated. The man was engaged in dipping cattle in Montana—an occupation involving exposure to the infection. Together with several other men, he was vaccinated late last spring, and, sometime afterwards, he contracted the fever. This case was exceedingly mild, though it is usually severe and highly fatal in that locality. None of the other vaccinated men contracted the disease.

Should this vaccine fulfill the expectations confidently hoped for, another advance will have been made along that high road of preventive medicine known as "immunology", toward the goal set by Pasteur when he stated that it was within the power of man to cause all germ disease to disappear from the world.

CORRESPONDENCE.

Dear Editor:

When Dr. John Callan as a member of the Board of Administrators of Tulane, brought about the birth of the School of Tropical Medicine, (he was the father and the accoucheur), the child was born with all the marks of a premature weakling. It was christened and I was selected as the godfather. I took charge of the little fellow and placed it at once in Dr. Bill Seemann's Incubator, and fed it carefully on Tropical Parasites. It survived the ordeal but it never had a strong voice, the Caruso-like thunders of the healthy baby. Its voice was so feeble, so monotonous that, surroundings aiding, my class during the lectures on tropical medicine, would go to sleep. Now here, I was trying my best without the result of rearing the child as I dreamt of. So I resigned the job to make room for a better educator, with more tropical potential than I possessed. I thank my stars to have lived long enough to see my baby, now, in the hands of Castellani. I can now die contented. The child shall and it will live and *prosper*. I am delighted. No artist could describe and present to you the infancy of the School of Tropical Medicine in New Orleans, in any other mood than that of genuine, pleasant *humor*, because surroundings made it so "funny," as is the rule in everything else. Think of the beginnings of medicine and surgery, we admire so much in all their growth, as we admire and stare at beautiful things. I am 67, but I feel young, and I keep posted on literature, Tropical literature included, in my reading courses from the Bible, Cicero, Pasteur's life, to the dailies, and I know perhaps better than many, that Castellani is a giant in Tropical Medicine. Like Brown-Sequard, my *ex-worshipped* master at the College de France, I start reading at 2 or 3 o'clock in the morning so I must know some things. The portico of the Tropical School Building could "a propos" paraphrase Dante's famous warning at the entrance of Hell: "Voi ch'intrate, lasciate ogni speranza," that means "Whoever enters here must abandon all hope," and bear the warning, "Who enters here shall emerge full of tropical medicine with great hopes for good to mankind." Dr. Bass (now Dean of Tulane Medical College) who was presenat at the birth of the Tropical Medicine School, certainly had a good inspiration in selecting Castellani, and I would not be a bit surprised to hear from a reliable source that my friend Matas contributed his share to the conquest, as usual for the benefit of medical education in our native city, nobly struggling to recognition among large educational centers. At twenty, just as I started my first year in medicine (1880), I had charge of academic lectures on literature and language in the popular "Association Polytechnique," branch of the 13th district of Paris, and I had a strong desire to abandon medicine and to go into "Classical literature of fiction writing." Well now, 47 years later today, I am glad I stuck to medicine for medical literature is really classic fiction, more real today than ever truth was. I think you.

DR. E. M. DUPAQUIER.

NEWS AND COMMENT

DEPARTMENT EDITORS.

H. Theodore Simon, M. D., Louisiana.

J. S. Ullman, M. D., Mississippi.

LOUISIANA.

"Every man owes some of his time to the upbuilding of the profession to which he belongs."
—Theodore Roosevelt.

BULLETIN OF THE ORLEANS PARISH MEDICAL SOCIETY—DECEMBER.

During the past month the Board of Directors held their usual meeting, and in addition there was an executive meeting at which the election results were announced, and one scientific meeting.

At the scientific meeting there was a total attendance of 66. The following papers were presented and discussed:

"The Significance of Early Diagnosis of Esophageal Diverticulum. Case Report."

By Dr. A. L. Levin.

Discussed by Dr. S. K. Simon and closed by Dr. Levin.

"Pellagra. Gastric Content." By Dr. J. Birney Guthrie.

Discussed by Drs. Silverman, Jamison, S. K. Simon, J. H. Musser, A. L. Levin and closed by Dr. Guthrie.

"Evidences of Hypophyseal Dysfunction, with lantern slides." By Dr. I. I. Lemann.

A Committee of the Board of Directors appointed to prepare a necessary revision of By-Laws has completed its work and has reported to the Board and to the General Society. Besides some necessary revisions the Committee has determined on the phraseology of resolutions which have been adopted by the Society in the past three or four years. This matter will be brought to the attention of the Society for disposition at one of the meetings in January.

The following have been elected to interne membership: Drs. Frank J. Beyt, Julian Graubarth, John F. Lucas, H. Aubrey White, Robert C. Hill, James A. Johnson and Marion A. Young, Jr.

Dr. J. N. Lockard was elected to active membership.

The application of Dr. A. J. K. Genella has been dropped from our list of applicants owing to his failure to meet the necessary requirements.

As Dr. John F. Dicks was absent from the City, his letter declining his nomination was received too late to allow notification of the membership of his action.

The Board of Directors extended an invitation to the Radiologi al Society of North America to meet in New Orleans in 1926, but advised its representative, Dr. Amedee Granger, that the Society could not obligate itself in any financial way for this meeting.

At the annual election the following Officers were chosen and will be installed at the annual meeting, January 11th, 1926.

President, Dr. Maurice J. Gelpi.

First Vice-President, Dr. J. Birney Guthrie.

Second Vice-President, Dr. Marcy J. Lyons.

Third Vice-President, Dr. E. J. Richard.

Secretary, Dr. H. Theodore Simon.

Treasurer, Dr. John A. Lanford.

Librarian, Dr. Daniel N. Silverman.

Additional Members to the Board of Directors.

Dr. Jules Dupuy, Dr. Urban Maes, Dr. L. M. Provosty.

The total vote numbered 86 including one spoiled ballot. The vote on the "Advertising Campaign" is as follows:

For, 35; Against, 50.

The above results were certified to by the three tellers, Dr. Cosmo J. Tardo, Dr. L. J. Stookey and Dr. Morell W. Miller, and in addition were signed by the Secretary.

An executve meeting preceded the banquet, the order of business being the announcing of the election returns. The annual dinner of this Society held at Kolb's Restaurant with an attendance of approximately 175 members, proved a very enjoyable affair. Dr. Urban Maes, presided, but turned the conduct of the affairs of the evening over to the very capable hand of the evening's chairman, Dr. Paul J. Gelpi. In

addition to an attractive menu several stunt features were provided, certain members being called upon to respond after being the recipient of a gift. A splendid feeling of fellowship prevailed and the president-elect stated in the course of a few remarks that he hoped this would become an annual affair and he felt that this was one of the best means of bringing our membership closer together.

Dr. Dorothy Edwards resigned on account of removal.

The membership to date is 480.

FOURTH DISTRICT MEDICAL SOCIETY.

The regular semi-annual meeting of the Fourth District Medical Society was held at the Shreveport Charity Hospital on Tuesday evening, November 17th. The meeting was marked by an attendance of about one hundred doctors and by the high quality of papers presented. The meeting was conducted by Dr. C. M. Baker, of Minden, President, and Dr. J. E. Heard, of Shreveport, Secretary. The visitors, Drs. Doussan and Sellers, of New Orleans, were introduced and received an ovation.

After call to order by Pres. Baker, Dr. A. P. Crain, Vice-President of Shreveport Medical Society, spoke words of welcome. Dr. R. C. Young read a paper on "Pseudo-Diphtheritic Conjunctivitis with Corneal complications; Report of Case;" discussed by several members. Then Dr. J. E. Doussan, State Registrar, gave an interesting and forceful talk on "Vital Statistics," stressing the necessity for co-operation of the doctors; after discussing this matter, dinner was served by the Hospital authorities, Dr. J. M. Moseley, Supt.

After dinner, Dr. T. B. Sellers, of New Orleans, read on the "Treatment of Pernicious Vomiting of Pregnancy, with Report of Cases;" this paper was well received and provoked much discussion. Dr. B. Johns gave a paper, entitled "The Surgical Treatment of Seminal Vesicles and Prostate, which are producing Focal Symptoms," followed by discussion. The last paper was "Diagnosis and Management of Postoperative Intestinal Obstruction with Report of Cases," by Dr. T. J. Fleming; this paper lead to free discussion.

After a few remarks by District Councillor Herold, election of officers resulted as follows: President, Dr. W. B. Hunter, of Coushatta, Red River Parish; First Vice-President, Dr. O. O. Hamner, of Arcadia, Bienville Parish; Second Vice-President, Dr. J. E. Heard, of Shreveport; Secretary-Treasurer, Dr. C. E. Hamner, of Shreveport; Delegate to State Society, Dr. C. M. Baker, of Minden, Webster Parish. The meeting then adjourned till the spring of 1926.

MONTHLY BULLETIN OF THE SHREVEPORT MEDICAL SOCIETY.

November, 1925

November meeting of the Shreveport Medical Society, November 3rd, was held at Charity Hospital, at 8 p. m.

November Scientific Program.

Reports from Congress of American College of Surgeons, by Dr. Abramson, Dr. Johns and Dr. Sanderson. Clinical Case by Dr. Norfleet.

Charity Hospital, October 7th, 1925.

The regular monthly meeting of the Shreveport Medical Society was called to order at 8 P. M. by President Sanderson. The minutes of the last meeting were read and approved. The Secretary read an application for membership from Dr. Helen E. Heinton, which was referred to a committee composed of Drs. Pirkle, Williams and Boyce. A letter was read from Science Extension, announcing lectures by scientists. The letter was referred to the Secretary for investigation. Letters from Dr. Dowling, President of the State Board of Health, and from Rapides Parish Medical Society were read and explained, and a motion was passed that the letters be filed.

Dr. Sanderson reported that Dr. Fishbein can probably be secured for a meeting next spring. Dr. Sanderson brought up the subject of having a medical meeting for the general public. Dr. Knighton made a motion that such a meeting be held in November, if possible. Discussion by Drs. Barrow, Hendrick and Rigby. Motion was passed. A special committee was appointed to arrange details for this program. The committee consists of Drs. Knighton, Hendrick, Herold and T. E. Williams.

Scientific Program.

Dr. Willis P. Butler read an interesting and instructive paper on vaccines and sera. Discussion by Drs. Gowan, Herold and Hendrick. Dr. Hendrick called attention to dogs going unmuzzled on the streets and requested enforcement of the muzzle law. Dr. Butler called attention to a meeting with some of the officials on this subject. Dr. Hendrick made a motion that the Commissioner of Public Safety be asked to remove the menace of rabies by proper muzzling of dogs or vaccination, and the Medical Society will cooperate with him in any way possible. Discussion by Dr. Sandidge. Motion passed. Secretary was instructed to communicate the resolution to the

Commissioner of Public Safety and the Humane Society, and send a copy to the press. Discussion of Dr. Butler's paper by Drs. Carl Young, Knighton, Bodenheimer, Hamner and Lucas. Closing by Dr. Butler.

There were no clinical cases.

Dr. Caldwell brought up the question of a Medical Library and made a motion that a committee of three be appointed to act as a library committee. Motion seconded and passed. On the committee were appointed Dr. Caldwell and two others to be named later.

Dr. Barrow made a motion that a resolution be passed expressing our confidence in Dr. Garrison, dentist, professionally, and as a man. The motion was seconded by Dr. Butler, and passed. Discussion by Dr. Sanderson.

On motion, the Society was adjourned.

R. T. LUCAS, Secretary.

SHREVEPORT MEDICAL SOCIETY.

At the December meeting of Shreveport Medical Society, the following were elected for 1926: President, Dr. A. P. Crain; Vice-Presidents, Drs. I. B. Rougon and M. S. Picard; Secretary, Dr. W. R. Harwell; Treasurer, Dr. J. R. Stamper, re-elected. Delegates were chosen to the Monroe meeting, viz: Drs. J. E. Knighton, R. G. Douglass, S. C. Barrow, E. L. Sanderson, J. M. Moseley, W. P. Butler; alternates: Drs. J. L. Scales, F. H. Walke, R. T. Lucas, F. S. Furman, C. R. Gowan, G. A. Caldwell.

ST. TAMMANY PARISH MEDICAL SOCIETY.

The St. Tammany Parish Medical Society held its regular monthly meeting on December 11th last. Inasmuch as this was the Annual Meeting, scientific papers and discussions were dispensed with, and the Society engaged in a round table talk with the welfare of the doctor as an individual, and the Society itself as the subjects.

The Society unanimously and strongly endorsed the stand and contemplated action of the Rapides Parish Medical Society against that Parish's Police Jury's attempt to prevent Physicians from writing and druggist from filling prescriptions calling for whiskey or any other alcoholic liquor, even though the prescription be written in the exercise of the doctor's professional duties.

This Society offered its active as well as moral support and instructed its delegate and alternate to stand by the Rapides Society if the matter should be taken up by the State Medical Society or its Board of Delegates, at the approaching meeting in Monroe.

The following officers were elected for 1926:

President, Dr. F. T. Singleton, Slidell; Vice-President, Dr. C. F. Farmer, Pearl River; Secretary-Treasurer, Dr. H. E. Bulloch, Covington (re-elected); Delegate to the State Society, Dr. J. F. Buquoi; Alternate, Dr. A. G. Maylie, both of Covington.

These officers will be installed at the Annual Banquet at the Southern Hotel on January 8th, 1926, with Dr. J. E. Doussan, State Registrar of Vital Statistics, and the respective Presidents of the Washington and Tangipahoa Medical Societies as guests of honor.

In attendance at the meeting were Drs. G. A. Pennington, F. R. Singleton, H. D. Bulloch, J. K. Griffith, J. F. Polk, J. F. Buquoi, F. F. Young, F. F. Young, Jr., L. R. Young, C. F. Farmer, H. E. Gautreaux, W. L. Stevenson and A. G. Maylie

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An event of more than passing notice was the formal opening of the up-to-date new Haynesville Hospital at Haynesville, Claiborne Parish, on October 5th. This modern brick building, with full equipment would be a credit to any city. Dr. C. O. Wolff, of Haynesville, is President and Chief Surgeon, and it is due to his energy and enthusiasm that this project was successfully carried through.

Mrs. F. A. Kolman, of New Orleans, Organizer of the Tuberculosis and Public Health Association of Louisiana, recently visited every parish in the Fourth Congressional District and did very effective work.

Drs. Louis Abramson, E. L. Sanderson, Barron Johns, L. H. Pickle, Allyn Moise and Guy A. Caldwell represented the Fourth District at the recent Clinical Congress of Surgeons at Philadelphia.

Among the Louisiana Doctors attending the Southern Medical Association meeting at Dallas in November, were the following from the Fourth District, viz: Drs. W. B. Hunter, of Coushatta; W. B. Hewitt and B. C. Cooper, of Mansfield; J. L. Scales, J. E. Knighton, I. H. Smith, J. M. Bodenheimer, F. H. Walke, G. A. Caldwell, J. L. Kimbell, M. S. Picard, R. T. Lucas, C. B. Erickson, J. A. Hendrick, A. A. Herold, of Shreveport; R. E. Baker, of Dixie; C. M. Baker, of Minden, and others.

CLAIBORNE PARISH MEDICAL SOCIETY.

A well-attended and enthusiastic meeting of Claiborne Parish Medical Society was held at Homer on the evening of December 8th, under the presidency of Dr. J. D. Baucum, of Haynesville. After the transaction of routine business, including the payment of dues for 1926, Dr. Rivenbark, the Secretary, read a most interesting and instructive paper on "The Acute Abdomen," stressing especially the "Don'ts" in handling these cases; the paper was freely discussed. Dr. A. A. Herold, District Councilor, present by invitation, made a talk on "Modern Advances in Therapeutics," which was also discussed; he also spoke on the State Society and urged a good attendance at the Monroe meeting, as well as at the Fourth District Medical Society. Dr. J. G. Gladney, of Homer, was chosen delegate, with Dr. E. B. Middleton as alternate, for the Monroe session.

POINTE COUPEE PARISH MEDICAL SOCIETY.

On Tuesday, November 1st, the Pointe Coupee Parish Medical Society held its regular monthly meeting at New Roads.

Dr. M. O. Decnel reported an interesting case, somewhat out of the ordinary, which was discussed by all the doctors present. Dr. J. F. Cazayoux called up for discussion the proposed ordinance for sanitary toilets throughout the parish, said ordinance having been drawn by the State Board of Health for presentation to the police jury for its consideration.

After full and thorough discussion of the whole question, on motion duly seconded, the measure was unanimously approved by the Society. This matter having been disposed of, the Society then went into the election of officers to serve during the ensuing year with the following results: President, Dr. R. McG. Carruth, New Roads; Vice-President, Dr. Geo. B. LeSueur, Morganza; Secretary-Treasurer, Dr. F. F. Rougan, Oscar. Dr. Carruth was then named delegate to represent the Society in the State Medical body, with Dr. Becnel as alternate.

EAST BATON ROUGE PARISH MEDICAL SOCIETY.

December Meeting, 1925.

The East Baton Rouge Parish Medical Society met in regular monthly session at the Alvis Hotel, Baton Rouge, on Wednesday, December 9, 1925, with the following members present: Drs. Paulsen, Eidson, Pipes, Sitman, Stirling, Hirsch, McCaa, Irwin, McMahon, Williams, P. H. Jones, Kemp, Riche, Weiss, Porter, Trahan, and Wallace.

As Dr. Trahan was delayed, the meeting was called to order by Dr. Riche. As Dr. L. G. Stirling had a patient present, the usual order of procedure was dispensed with and Dr. Stirling then presented the case, Bilateral Popliteal Aneurisms after successful operation. The case was discussed by Drs. Weiss, Hirsch and McMahon.

The minutes of the previous meeting were read and adopted as read.

A letter from the Baton Rouge Civic Association in regard to the establishment of a free clinic for the treatment of venereal diseases was read and discussed by Drs. Sitman, Pipes, Riche, Stirling, Kemp, Trahan and Hirsch. The Secretary was instructed to answer the letter with the following opinion: "After thorough discussion the concensus of opinion of the Society was that it would be a useless expenditure of money, especially as the Government and State have tried the clinics and found them unsatisfactory."

A letter of appreciation to the Society from Dr. C. P. May, of Jackson, for being elected an Honorary Member of the Society, was read.

The Secretary was instructed to answer the questionaire sent out by the Bureau of Health and Public Instruction of the American Medical Association.

A letter from the Executive Secretary, Bureau of Legal Medicine and Legislation, American Medical Association, was read and discussed by Drs. Trahan, Sitman, Riche, Williams and Eidson. A committee of Drs. Riche, Porter and Sitman was appointed to see the authorities in regard to the matter. The letter was in regard to the drafting of uniform laws and regulations for the control of traffic by the National Conference of Street and Highway Safety, with respect to speed limits, parking privileges and right of way of physicians. On motion, the Secretary was instructed to purchase for the Society the necessary number of American Medical Association Insigna for automobiles.

The President, Dr. E. O. Trahan, made his report. The Secretary-Treasurer, Dr. R. B. Wallace, made his report.

Scientific Program: Dr. E. K. Hirsch presented two kidney cases, one Enartheritis Obliterans, which had been operated successfully, the other a case of Hematuria in a white female—age 72. The X-ray pictures of the cases were presented. The cases were discussed by Drs. Stirling, Kemp, Trahan, and by Dr. Hirsch in closing.

Dr. R. C. Kemp then reported a case of severe Aestevo-Autumninal Malarial Infection, which he treated successfully with one dose of Neo-Salvarsan intravenously. Dr. W. R. Eidson reported a case of an open safety-pin in the Vagina of a small child. Dr. S. D. Porter reported a case of a hat-pin in the bladder of an adult female. Dr. R. G. McMahon reported a case of the rupture of intestine in a strangulated hernia, caused in an automobile accident.

Election of officers: The following officers were elected for the year 1926: President, Dr. R. B. Wallace; Vice-President, Dr. W. H. Pipes; Secretary-Treasurer, Dr. S. D. Porter; Delegates to the State Society: L. J. Williams and E. O. Trahan; Alternates: for Dr. Williams, Dr. W. R. Eidson; for Dr. Trahan, Dr. G. W. Sitman.

The President appointed Drs. Irwin and Pipes on the Program Committee for the next meeting.

On motion, the meeting then adjourned.

The Bi-Parish Medical Society of East and West Feliciana Parishes met in Jackson, Louisiana, with Supt. T. J. Perkins and Staff. Interesting clinical cases were presented by Drs. Hays and Miller. Members present: Drs. Lea, Keller, Perkins, Miller, Hays, Brown, Stringer, Daniel, May and Toler. Usual luncheon with Dr. Perkins and Staff.

Election of officers for 1926: President, Dr. T. J. Perkins; Vice-President, Dr. J. M. Daniel; Secretary-Treasurer, Dr. E. M. Toler; Delegate, Dr. C. S. Miller; Alternate, Dr. J. M. Daniel.

NOTICE.

We wish to advise that all those desirous of attending the American Medical Association Meeting in Dallas in April, 1926, can secure Pullman reservations by leaving their name with the Assistant Secretary-Treasurer of the Louisiana State Medical Society, 1551 Canal Street.

All members of the Louisiana State Medical Society who are doing railroad work, are urgently requested to send their $1.00 dues for membership in the Railway Surgeons' Association of Louisiana for 1926 promptly. Address Dr. Roger Brewster, Secretary, 3513 Prytania Street.

Their Annual Meeting will be held in Monroe during the State Medical Society Meeting, the time, place and program to be announced later.

Dr. H. B. Gessner, of New Orleans, was elected Vice-Chairman of the Section on Sugery of the Southern Medical Association.

The following physicians of Louisiana were in attendance at the Southern Medical Association Meeting in Dallas in November:

Allums, Claude C., Ringgold, La.; Bahn, Chas. A., New Orleans, La.; Baker, Claude M., Minden, La.; Baker, L. T., Dixie, La.; Barrow, S. C., Shreveport, La.; Bass, C. C., New Orleans, La.; Bass, Elizabeth, New Orleans, La.; Bienvenu, L. J., Opelousas, La.; Bodenheimer, J. M., Shreveport, La.; Bradburn, Muir, New Orleans, La.; Caine, Ansel M., New Orleans, La.; Caldwell, Guy A., Shreveport, La.; Carruth, R. McG., New Roads, La.; Cather, E. J., Oakdale, La.; Chambers, H. C., Rayville, La.; Comeaux, A. J., Youngville, La.; Cooper, B. D., Mansfield, La.; Crebbin, John T., New Orleans, La.; DeBuys, L. R., New Orleans, La.; De Gravelles, C. C., Morgan City, La.; De Le Houssaye, Roy E., New Orleans, La.; Dempsey, J. Geo., New Orleans, La.; De Nux, E., Echo, La.; Denney, D. E., Carville, La.; Dowling, Oscar, Shreveport, La.; Dupuy, Homer, New Orleans, La.; Duval, Charles W., New Orleans, La.; Erickson, C. B., Shreveport, La.; Eustis, Allan, New Orleans, La.; Foote, J. Randolph, New Orleans, La.; Foster, M. H., Alexandria, La.; Funderburk, Joe M., Winnsboro, La.; Gessner, Herman B., New Orleans, La.; Gorton, Levin Wailes, Shreveport, La.; Gray, C. P., Monroe, La.; Guthrie, J. Birney, New Orleans, La.; Harris, Wm. H., New Orleans, La.; Hatch, Edward, New Orleans, La.; Heath, Arthur G., Shreveport, La.; Hendrick, J. A. Shreveport, La.; Heninger, Ben. R., New Orleans, La.; Herold, Arthur A., Shreveport, La.; Hewitt, W. B., Mansfield, La.; Hoffpauer, M., Crowley, La.; Holloway, Eugene, Plaquemine, La.; Hopkins, Ralph, New Orleans, La.; Hunter, W. B., Coushatta, La.; Irwin, Emmett L., New Orleans, La.; Jackson, Rufus, Baton Rouge, La.; Jamison, Chaille, New Orleans, La.; Jones, R. P., Baton Rouge, La.; Keller, David H., Pineville, La.; Kimbell, John L., Shreveport, La.; King, W. V., Mound, La.; Knighton, J. E., Shreveport, La.; Landry, Adrian A., Plaquemine, La.; Lanford, John A., New Orleans, La.; Lester, W. D., Many, La.; Levin, A. L., New Orleans, La.; Levy, Walter E., New Orleans, La.; Lucas, Robt. T., Shreveport, La.; Lynch, R. C., New Orleans, La.; Lyons, M. J., New Orleans, La.; Mangham, A. D., Elizabeth, La.; Martin, Claude A., Welsh, La.; Martin, E. Denegre, New Orleans, La.; Mattes, Abraham, New Orleans, La.; McBride, D. C., Alexandria, La.; McCormac, Edward, New Orleans, La.; McKinney, G. C., Lake Charles, La.; Miller, C. Jeff, New Orleans, La.; Miller, V. A., Lake Arthur, La.; Musser, J. H., New Orleans, La.; Nelken, A., New Orleans, La.; Newman, J. W., New Orleans, La.; O'Ferrall, J. T., New Orleans, La.; Parham, Frederick W., New Orleans, La.; Peacock, Cassius

L., New Orleans, La.; Peters, Jas. I., Alexandria, La.; Pierson, Clarence, Alexandria, La.; Rand, Paul King, Alexandria, La.; Roberts, Sam T., De Ridder, La.; Roussel, J. N., New Orleans, La.; Samuel, E. C., New Orleans, La.; Sandidge, W. J., Shreveport, La.; Saparito, Leo, Kaplan, La.; Sartor, James C., Rayville, La.; Scales, John L., Shreveport, La.; Silverman, D. N., New Orleans, La.; Simon, Sidney K., New Orleans, La.; Slaughter, J. H., Bogalusa, La.; Smith, David S., Mound, La.; Smith, I. Henry, Shreveport, La.; Tolson, F. R., Lafayette, La.; Turner, John R., Homer, La.; Unsworth, C. V., New Orleans, La.; Von Meysenbug, L., New Orleans, La.; Walke, F. H. Shreveport, La.; William, Sidney L., Shreveport, La.; Wolff, S. B., Opelousas, La.; Worley, W. B., Shreveport, La.; Yearwood, J. G., Gayle, La.; Younger, T. B., Fisher, La.

AMERICAN BOARD OF OTOLARYNGOLOGY.

An examination was held by the American Board of Otolaryngology on October 19th, 1925, at the Cook County Hospital, Chicago, with the following result: Passed, 120; failed, 23; total examined, 143. The next examination will be held in Dallas, Texas, on April 19, 1926. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grant Boulevard, St. Louis, Missouri.

The Southern Baptist Hospital expects to be completed about February 1st. A number of friends of the institution recently have made donations to establish memorials, among them being Luca Vaccaro $10,000.00 for the X-ray Department; Fred W. Salmen, the chapel; J. E. Badger, the administrative offices; J. B. Simmons, the lobby; Mrs. J. W. C. Wright, Sam Bonart, Simon Leopold, W. D. Barker and several local church organizations each a bedroom.

At the annual meeting of the Medical Library Association, held in Atlantic City in May, one of the most important subjects under discussion was the present attitude of the German medical publishers in the high prices charged foreign subscribers for their medical publications and the greatly increased output of their periodicals.

In compliance with the action taken, the Executive Committee is now making an investigation of this matter. As a result of its findings, it is to decide whether or not concerted action on the part of medical libraries in America will cause the German publishers to curtail their output and reduce the cost of their publications to their American customers.

With the growing popularity of acidophilus treatment, various forms have been suggested and introduced for the administration of this bacillus, all of which have been subject to more or less objection.

A very convenient and practical manner for the administration of the Acidophilus Bacilli has been introduced by the H. K. Mulford Company in the form of an agar jelly block, coated with chocolate.

New Jersey's new bureau of tuberculosis has established 12 monthly clinics where diagnosis of the disease is made, and has assisted school inspectors in the examination of children, especially those 20 per cent underweight for their age and height.

There will be a sectional meeting of the American College of Surgeons, including the states of Alabama, Florida, Georgia, Mississippi and Louisiana, in New Orleans on January 25 and 26, at the Roosevelt Hotel. A cordial invitation is extended to the medical and nursing professions to attend these meetings. There will also be a Public Community Health meeting on the evening of January 25 to which the public is cordially invited, and we will be very glad if each member would notify the public of this meeting.

NOTICE OF EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE.

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named places on the dates specified:

At Washington, D. C., February 8, 1926.

At Chicago, Ill., February 8, 1926.

At New Orleans, La., February 8, 1926.

At San Francisco, Cal., February 8, 1926.

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

The semi-annual examination of the Louisiana Nurses Board of Examiners was held in New Orleans and in Shreveport, November 16-17, 1925.

The successful applicants are:

Misses Frances Rivers Anthony, Cordelia Frances Arbour, Annabel Ayraud, Nell Marie Bailey, Marie J. Baluski, Mary Elaine Bankston, Regina Mary Belanger, Thelma Berger, Stella E. M. Berthelot, Charlotte Madeleine Bichon, Allie Maude Brian, Clara Elizabeth Burke, Mrs. Odile Delaune Carriere, Frankie Virginia Childress, Katherine Olive Clausen, Valras Julie Clingen, Edith Marie Daigle, Bert Dalrymple Velma Davis, Willie M. Decker, Mary Louise De Soto, Bessie Pearl Dodwell, Dorothy Irene Farrow, Cecelia H. Finnegan, Lucy Firmin, Rosalie Marie Forsman, Alma Marjorie Greer, Susie Mae Hart, Mary Margaret Hennigan, Marie Hohorst, Ethel Horton, Noelie Frances Hotard, Pauline Marceline Hyver, Beulah Mary Jarveaux, Mable Donna Johnson, Elizabeth Browne Jones, Lillie Anne Keller, Mrs. Cecile Morse Klein, Mrs. Annie Alice Denson Love, Margaret Mary Lynch, Minnie Jane McRight, Theresa Mary Meadows, Mrs. Inez Vander Cruyssen Mouton, Mrs. Vivian Hadley Munson, Marie Owsley, Mrs. Fannie A. Howell Parker, Ola Permenter, Lenamae A. Pevey, Emily J. Picou, May Edyth Pittman, Alice Louise Poche, Alice Faust Reuther, Vera M. Robards, Mrs. Bertha Parent Rousseaux, Louise Marie Savoie, Rose Schexnaydre, Viola Scott, Vera Cecile Smith, Sister Mary Berchmans, Sister Mary Camillus, Sister Mary Carmel, Sister Mary Emanuel, Sister Mary Hilda Mintken, Sister Mary Pius Murphy, Eleanor Mary Templet, Willie Ruth Thompson, Flavia Mary Cecelia Toups, Mary Ilys Valentine, Thelma Waldron, Willie Lee Waldroup, Annie Jane Waller, Bernadette Marie Webre, Agnes Elizabeth Williams, Mrs. Mauxine Dunn Williams, Ruth Willard Williams, Ruby Worley, Bertha Lucille Woodville, Mrs. Myrlie D. Walker Wright.

Veronica Ethel Armand, Mrs. Bessie Mae Wactor Armant, Isabel R. Ball, Camille Courtney Barker, Eleanore Marguerite Bonnet, Rubye R becca Crawford, Julia Eleonor Du Rocher, Bertha Elizabeth Earles, Belle Elliott, Mrs. Grace F. Estes, Elizabeth Compton Hanlon, Lorene Jackson, Mary Beatrice Kendrick, Vivian Catherine Leidner, Myrtle E. Powell, Annie Maniah Pryor, Estelle Louise Ryan, Marguerite Louise Sanarens, Gladys Heloise Stallings.

Colored applicants: Tommy Elmira Logan, Josie Olivia McKay.

RAPIDES PARISH MEDICAL SOCIETY UPHOLDS LAW.

At a special meeting, November 25th, 1925, the Rapides Parish Medical Society unanimously adopted the following as part of the Constitution and By-Laws:

WHEREAS, it has come to the attention of the Rapides Parish Medical Society, that certain of its members have not been too careful in complying with the laws of the land; and,

WHEREAS, such practices should be condemned and stopped; therefore, be it

Resolved, By the Rapides Parish Medical Society, that if any member be found guilty of prescribing any form of opium, especially morphine, illegally, he or she shall be expelled from the Society; and, be it further

Resolved, That if any member of this Society be found guilty of selling or trading or giving away his or her National Prohibition prescription book or books, either in whole or in part, in quantities, to any druggist, drug store or individual, this member shall be expelled from this society; and, be it further

Resolved, That the Rapides Parish Medical Society vehemently disapproves of the writing of prescriptions for intoxicating liquor for any purpose save medical in the treatment or cure of disease.

This is indeed a move forward and shows a disposition on the part of the Medical Society to help suppress illegal prescribing or dispensing of narcotic drugs and whiskey. The authorities whose duty it is to enforce the laws of the land will be appreciative of this evidence of co-operation on the part of organized medicine in Rapides.

It might interest the readers of The Journal to know that the lamented Chaille, who taught so many of the medical profession of Louisiana and Mississippi, held that the prescribing of whiskey was a hygienic problem, and so did the late Dr. Peter Bryce, of Alabama. Each of these noted authors held that the benefits of whiskey were far outweighed by the harm it does even as a medicine.

The Medical Profession is still divided as to the value of whiskey as a therapeutic agent. When the last referendum on this subject was taken by

the American Medical Association, of the sixteen southern states comprising the Southern Medical Association, four—Louisiana, Maryland (including District of Columbia), Missouri and Virginia—voted for and twelve against whiskey as having therapeutic value. The vote of the doctors showed 46.7% favoring the use of whiskey and 53.3% against.

During 1922 the physicians of Louisiana wrote 96,049 whiskey prescriptions, in 1923 there were 158,685, and for 1924 the records reveal 194,786. Mississippi physicians are not permitted to write whiskey prescriptions.

There is no record of pre-Voistead prescriptions by physicians for whiskey as a medicine.

DR. ROYSTER HEADS S. S. A.

Dr. Gilbert A. Royster, of Raleigh, N. C., was elected president of the Southern Surgical Association at their recent meeting in Louisville. Dr. Royster had been secretary of the association for the past nine years. He succeeds Dr. Irvin Abell, of Louisville. Dr. Louis Frank, of Louisville, was elected vice-president, and Dr. Frank K. Boland, of Atlanta, was elected second vice-president. Dr. Robert L. Payne, of Norfolk, Va., was elected secretary.

GYE HONORED.

Dr. William E. Gye, of cancer research fame, has been awarded the annual fellowship established by London University for the graduate of that institution who has done the most towards the advancement of medical science in the past five years. The fellowship carries a stipend of about $1500.

MISSISSIPPI.

Mrs. S. W. Johnston, of Vicksburg, has taken over the presidency of the Woman's Auxiliary of the State Medical Association, Mrs. S. H. Hairston, of Meridian, having resigned.

Miss Baker, of Laurel, was elected Secretary of the Board at a recent meeting of the Nursing Board of the State of Mississippi.

The North Mississippi Six Counties Association met in Holly Springs on November 18th, and rendered a very interesting program, which included the following papers: An address, by the retiring president, Dr. George A. Brown; "Practical Points in the Differential Diagnosis of Goiter," by Dr. Wm. C. Chaney, Memphis, Tenn.; "Serum Diagnosis," by Dr. A. W. Pigott, Oxford, Miss.; "Inflammation in and About the Ear," by Dr. B. S. Guyton, Oxford, Miss.; "The Choice of an Anesthetic, with Special Reference to Nitrous Oxide-Oxygen, with the Gwathmey Apparatus." Discussion opened by Drs. Bramlett and Wesson.

Dr. J. I. Mayfield, of Ripley, was elected President, and Dr. S. E. Eason, of New Albany, was chosen Secretary and Treasurer.

Dr. B. B. Sayle, one of the oldest practitioners in Yalobusha County, died at his home in Coffeeville on the morning of December 10th.

Newton-Neshoba-Winston Tri-County Association met in Decatur, Mississippi, December 8th, in regular bi-monthly meeting, and elected officers for the ensuing year as follows:

President—Dr. A. L. Majure, Dixon, Miss.

First Vice-President—Dr. W. J. Pennington, Decatur, Miss.

Second Vice-President—Dr. M. L. Montgomery, Louisville, Miss.

Secretary-Treasurer—Dr. S. A. Majure, Hickory, Miss.

Censor—Dr. Dudley Stennis, Newton, Miss.

Delegates to the State Medical Association were Dr. W. T. Hunter, Decatur, Miss.; Dr. J. C. Hickman, Philadelphia, Miss., and Dr. T. F. Kilpatrick, Noxupater, Miss.

The next meeting will be held in Philadelphia, on the second Tuesday in February, 1926.

The following list of the officers and councillors of the Mississippi State Medical Association may prove useful as reference to the members:

President—G. S. Bryan, Amory, Miss.

Vice-President—F. G. Riley, Booneville, Miss.

Vice-President—O. N. Arrington, Brookhaven, Miss.

Vice-President—E. S. Bramlett, Oxford, Miss.

Secretary—T. M. Dye, Clarksdale, Miss.

—Treasurer—J. M. Buchanan, Meridian, Miss.

President Woman's Auxiliary—Mrs. S. W. Johnston, Meridian, Miss.

Councillors: First District—J. W. Lucas, Moorhead, Miss.

Second District—J. S. Donaldson, Oakland, Miss.

Third District—M. W. Robertson, Rienzi, Miss.

Fourth District—T. W. Holmes, Winona, Miss.

Fifth District—D. W. Jones, Jackson, Miss.

Sixth District—W. G. Gill, Newton, Miss.

Seventh District—T. M. Dye, Clarksdale, Miss.

Eighth District—W. H. Frizell, Brookhaven, Miss.

Ninth District—D. J. Williams, Gulfport, Miss.

BOOK REVIEWS

The Surgery of Pulmonary Tuberculosis: By John Alexander, B. S., M. A., M. D., with introductions by Hugh Cabot, M. D., C. M. G., L.L. D., F. A. C. S., and Edward R. Baldwin, M. A., M. D. Philadelphia and New York. Lea & Febiger. 1925.

The subject covered in this book is one which has been given practically no thought in our midst. It is surprising to note the great advances made by surgery in this particular branch; as brought out in this little volume. With due consideration, and until internal medicine shows us a better way, it appears—as the author has pointed out—that surgery is a valuable therapeutic measure; especially when the indications and contraindications, so excellently outlined by the author, have been duly considered.

While the various methods of procedure have been carefully covered, the author appears to lay particular stress on thoracoplasty and not enough emphasis is laid on artificial pneumothorax. Although the latter is dealt with at length the author fails to outline its technic; and it seems that a book dealing on this subject would certainly include such. Artificial pneumothorax is accordingly made to look more insignificant than it should be considered. However, in spite of this, the phthisiologist will find this little volume of value and interest. It is a book that should hold the interest of both internest and surgeon alike. The author is to be congratulated on writing such an excellent book on a subject that is still in the incipient stage.

FRANK L. LORIA, M. D.

The American Illustrated Medical Dictionary. A New and Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Science, Biology, Medical Biography, etc., with the Pronunciation, Derivation, and Definition Including Much Collateral Information of an Encyclopedic Character. By W. A. Newman Dorland, A. M., M. D., F. A. C. S. Thirteenth Edition, Revised and Enlarged. Philadelphia and London. W. B. Saunders Company. 1925.

This handsome and useful volume needs no introduction to be medical and allied professions and sciences. It is now twenty-five years since the first edition appeared and the thirteenth is a worthy descendant of the original edition. It defines about 2500 new terms and words, including several hundred dental terms. The binding, thumb index and typography leave nothing to be desired.

FRANCIS M. MUNSON, M. D.

Science and Art of Anesthesia: By Colonel William Webster, D. S. O., M. D., C. M. Illustrated. St. Louis. C. V. Mosby. 1924.

This is a small volume intended for medical students and general practitioners, and it seems that it has been very difficult to harmonize the needs of these two widely different classes. The material is excellent and comprehensive and its handling is of a high order so it is with much reluctance that we conclude that as a practical manual it is not satisfactory. The pharmacology and toxicology of general anesthetics is neither complete enough for a text, and the technique of the induction and maintenance of anesthesia, most important for both medical students and practitioners, is so casually considered as to be of slight value to persons without practical experience.

The opening chapter is a brief and very interesting history of anesthesia. Physiology is then considered with reference especially to chloroform and to the theory of cell asphyxia as the cause of the anesthetic state. Ether, nitrous oxide, chloroform, ethylene, ethyl chloride, ethyl bromide, and somnoform are discussed separately. A great many methods of administering each anesthetic are given, and while these are of much interest, I am sure the student would come to the end in a state of complete confusion, with little if any, idea as to which should be used.

A chapter on local and spinal anesthesia is so incomplete, even inaccurate, that it would have been best omitted.

To me the most interesting, almost startling thing about this book is the attitude toward chloroform and ethyl chloride. Both are considered as safe and satisfactory drugs, though their dangers are mentioned in passing. In America, I believe, both these agents are in well-deserved disrepute and I am sure most teachers in this community would consider it little less than a calamity to have students leave school with an impression such as Colonel Webster conveys. Possibly we are wrong, but the evidence is very convincing.

Our conclusion is that the author is able and well-informed, thoroughly capable of producing an exhaustive treatise on general anesthesia that would be valuable and authoritative, but that he has made an unfortunate compromise.

J. D. RIVES, M. D.

A Textbook of General Bacteriology. By Edwin O. Jordan, Ph. D. Eighth Edition. Thoroughly Revised. Philadelphia and London. W. B. Saunders Co. 1924.

The rapid progress of bacteriology makes necessary the frequent revision of the standard textbooks and the eighth edition of Professor Jordan's popular work is thoroughly in keeping as to reliability and clearness of statement, with the earlier editions. New material has been added on the bacteriophage phenomenon, tularemia, botulism, scarlet fever, and other subjects in which recent advances have been made. The chapter on anaerobes has been extensively revised. No change has been made in the typographical work or the binding.

FRANCIS M. MUNSON, M. D.

Bone Sarcoma: By E. A. Codman, M. D. New York. Paul B. Hoeber. 1925.

This little volume is timely in that it shows the necessity of standard nomenclature, even in so uncommon a condition as Bone Sarcoma.

Prior to this classification many different terms were used, and "while each term was vaguely understood by all who were interested in bone tumors, yet there was a considerable amount of misunderstanding among individuals," as evidenced by the writings of Bloodgood, Mallory and Ewing.

Each heading of the eight divisions of the official nomenclature is taken up, giving and discussing the clinical, microscopic and radiologic characteristics which make each heading a clinical entity.

In order to reach the desired goal—aid future sufferers from Bone Sarcoma—the author stresses the necessity first of a uniform classification which roentgenologists, clinicians and pathologists can use in order to have a mutual understanding of the clinical entities which are referred to, and second in "the spirit of co-operation"—co-operation first by registering the cases, and second by studying groups of registered cases.

P. G. LACROIX, M. D.

Methods in Surgery. Used in the Surgical Division of Barnes Hospital, St. Louis Children's Hospital, and Washington University Dispensary: By Glover H. Copher, M. D. St. Louis. The C. V. Mosby Co. 1925.

Doctor Copher's book is somewhat unique and promises to be very useful. It was prepared primarily for the guidance of house officers and students of the Washington University School of Medicine serving in the surgical division of the leading hospitals of St. Louis, but that will not limit its field of usefulness. No attempt is made to formulate rules for every contingency nor to do away with initiative or original work; rather it seeks to direct such effort. Some of the procedures presented represent the application of newer physiological ideas to the surgical clinic. It appears to the reviewer that this manual would be especially valuable to physicians and nurses engaged in establishing a new hospital.

FRANCIS M. MUNSON, M. D.

Eye, Ear, Nose and Throat Manual for Nurses: By Roy H. Parkinson, M. D. Illustrated. St. Louis. C. V. Mosby Co. 1925.

This Manual is designed primarily for use as a system for classroom teaching in the Nurses' Training School. Its style is clear and concise and its aim is to give the student nurse a general rather than a specific idea of what may be encountered in cases relative to Eye, Ear, Nose and Throat Diseases.

Part one gives short, clear lectures on the Anatomy, Symptoms and Diagnosis of the more frequent Eye, Ear, Nose and Throat conditions, and concludes each lecture with questions helpful to both student and instructor. The second part fills a long needed want in that it presents the various Operative procedures with good illustrations, in addition to complete lists of the instruments used in the treatment and surgery of Eye, Ear, Nose and Throat cases. The third part deals with problems pertaining to Public Health and should be of inestimable value to the reader.

F. E. LEJEUNE, M. D.

Symptoms of Visceral Disease. A Study of the Vegetative Nervous System in Its Relationship to Clinical Medicine: By Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P. Third Edition, with Eighty-six text Illustrations and Ten Color Plates. St. Louis, C. V. Mosby Company, 1925.

The fact that three editions of Doctor Pottenger's book have been published in six years would seem to indicate that it has gained a place in the field of the more advanced medical subjects. Several changes have been made in the present edition to make it conform to newer knowledge. Body reactions have been discussed from a broader standpoint than in previous editions. The physical state and the ionic content of the cell have been coupled with nerve response and there has been an attempt to show the part in reaction which is played by the chemical components and the physical state of the cell. Changes have been made throughout the text to bear out this conception of the topic. The book is a creditable presentation of the difficult and obscure subject of visceral neurology and its clinical applications.

FRANCIS M. MUNSON, M. D.

Diseases of the Nose, Throat and Ear, Medical and Surgical: By William Lincoln Ballenger, M. D. Revised by Howard Charles Ballenger, M. D. Fifth Edition. Philadelphia and New York. Lea & Febiger. 1925.

To those of us specializing in diseases of the nose, throat and ear, Ballenger's book has been an old and valued friend. The new edition follows the same clear and concise exposition of the subject that made the older editions popular.

The section on the technique of tonsillectomy has been revised, the editor favoring the Ballenger-Sluder method instead of the scalpel dissection preferred by the fourth edition. The chapters on Hay Fever, Hyperesthetic Rhinitis and Asthma have been revised. The newer ideas of Meniere's Symptom-complex and Gradenigo's syndrome have been incorporated.

The section on tracheotomy still adheres to the statement in the former editions, that "high tracheotomy is preferable," a dictum with which most laryngologists today will not agree on account of the great danger of cicatricial stenosis of the larnyx which attends the wearing of a tracheotomy tube through a high tracheotomic incision.

On the whole the book will continue to be the valued work of reference that its preceding editions have been.

H. L. KEARNEY, M. D.

Personal and Community Health: By Claire Elsmere Turner. Illustrated. St. Louis. The C. V. Mosby Co. 1925.

Teachers of public health will find in this recent addition to the literature of the subject a textbook of genuine merit, especially adapted to the class-room. It has been prepared for the student at the university, college or professional school and deals with the health of the individual and with the health of the community from the standpoint of the college or professional man who is not a sanitarian. It contains the information that the educated man should possess in order to protect his family and meet his responsibility as a citizen. It is not a "non-technical language-words-of-two-syllables" book for the untutored proletariat. It will make its strongest appeal to the thoughtful person who has a real interest in public health and in personal hygiene.

FRANCIS M. MUNSON, M. D.

PUBLICATIONS RECEIVED.

W. B. Saunders Company, Philadelphia and London: "Thoracic Surgery," by Howard Lilienthal, M. D., F. A. C. S., Volumes I and II. "Chemical Pathology," by H. Gideon Wells, Ph. D., M. D. "Medical Diagnosis," by James M. Anders, M. D., Ph. D., L.L. D., and L. Napoleon Boston, A. M., M. D. "Massage and Therapeutic Exercise," by Mary McMillan. "Psychology for Nurses," by Maude B. Muse, R. N., A. M.

C. V. Mosby Company, St. Louis: "The Therapy of Puerperal Fever," by Privatdozent Dr. Robert Koehler, American Edition prepared by Hugo Ehrenfest, M. D., F. A. C. S. "Physiology," by William D. Zoethout, Ph. D.

P. Blakiston's Son & Company, Philadelphia: "Gynecologic Urology," by Lynn Lyle Fulkerson, A. B., M. D., F. A. C. S. "Radiography," by Charles D. Enfield, M. D., F. A. C. P. "Medical Ophthalmology," by R. Foster Moore, O. B. E., M. A., B. Ch. F. R. C. S. "Insects and Diseases of Man," by Carroll Fox, M. D.

The MacMillan Company, New York: "Psychological Healing," by Pierre Janet, Volumes I and II.

Paul B. Hoeber, Inc., New York: "Annals of Roentgenology, A Series of Monographic Atlases," edited by James T. Case, M. D., Volume VI, "Skull Fracture," by Wm. H. Stewart, M. D. "'William Cadogan (His Essay on Gout)," by John Ruhrah, M. D.

Government Printing Office, Washington: The Medical Department of the United States Army in the World War, Volume XV, Statistics, Part Two, Medical and Casualty Statistics.

F. A. Davis Company, Philadelphia: "Intravenous Therapy," by Walton Forest Dutton, M. D.

Thomas Seltzer, New York: "Man: His Making and Unmaking," by E. Boyd Barrett.

The Oak Press, Chicago: "Submucous Endocapsular Tonsil Enucleations," excerpts from Clinics of Charles Conrad Miller, M. D.

Miscellaneous: "Eye Sight Conservation, Bulletin 7." "The Old Time Country Doctor," by Wm. Allen Pusey, M. D. "L'Anatomie en Poche," by Victor Pauchet and S. Dupret.

Reprints.

"Hookworm Disease in China," by W. W. Cort, Ph. D., J. B. Grant, M. D., and N. R. Stoll, Sc. D.

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